THE

CHICAGO MEDICAL EXAMINER.

N. S. DAVIS, M.D., EDITOR.

VOL. IV. JULY, 1863. NO. 7.

Original Contributions.

ARTICLE XV.

REPORT ON TYPHOID FEVER.

BY H. NOBLE, M.D., of Heyworth Ill.

Read to the Illinois State Medical Society.

MR. PRESIDENT AND GENTLEMEN:—The paper which I shall read to you is a "Report on Typhoid Fever," composed of remarks and observations on the nature and treatment of that disease.

This subject has, I know, been frequently and ably discussed: learned and minute essays from patient observers have from time to time been given, notwithstanding which, typhoid fever remains one of our most intractable diseases. I do not expect to elucidate in any great degree the obscurities of this disease, nor have I any special or new theory of its nature or cure. I only desire to give you in this report my own observations and conclusions, knowing well that from the sum of many observers' deductions the *truth* may, ultimately, be found.

My opinion is, that typhoid fever is a disease that is located, especially, in the mucous coat of the intestines; that in all cases of the disease there is irritation or inflammation of the mucous follicles, but not necessarily ulceration of Peyer's glands or any other tissue. Many cases of the disease, I think, show

all the symptoms of typhoid fever, and are fully matured without ulceration.

When the disease is uncomplicated, the patient, generally, complains for several days of slight indisposition only, the appetite sometimes not materially impaired, yet there is an evident want of nutrition. Before there is any abdominal tenderness, the tongue indicates mucous irritation, the tips and edges being red; and, as the disease progresses, the redness increases and becomes deeper, the surface becomes glossy and smooth, often with the papilla enlarged.

Unless modified by treatment, the bowels become tumefied and tender, on pressure, diarrhœa usually attending, in some cases the action of the bowels remain natural. The pulse is, generally, accelerated, sometimes to 150 to the minute, this is not invariably the case.

I have seen five or six cases of typhoid fever, in which, the pulse did not, for the first four weeks, exceed 50 beats to the minute, at any time that I observed it. One of these cases terminated fatally, after five weeks' duration, the pulse, during the last eight or ten days, reaching 120. As the other cases got well, the pulse increased in frequency until it reached the natural standard, but never exceeded it during the continuance of the disease.

In the fatal cases which I have seen, death resulted from the following causes, viz.:—Perforation of the intestine, prostration or exhaustion of the vital forces, and from the complication of other diseases. Perforation of the bowel, though not very common, is *very fatal*, no case that I have seen surviving more than thirty or forty hours after the occurrence took place. When perforation of the bowel occurs, it is attended with symptoms of peritonitis; the agonized expression of countenance being always present; pulse rapid and feeble; excessive restlessness; cold sweat; and rapid prostration.

The collapse which follows perforation of the bowel, in typhoid fever, resembles, in every respect, so far as I can judge, the collapse of Asiatic cholera,—the want of capillary circulation is shown by the blue color of the skin being alike in

both cases. The patient, after perforation, is sensible of pain for a short time only, say from two to six hours, after which, the nerves loose their normal action and do not respond to the stimulus which usually excites sensation. Those cases which died of prostration, had been sick from six to twelve weeks, and were attended with a general failure of the vital forces. We sometimes see cases begin, and progress in a mild form, and without complication, yet the patient becomes emaciated and feeble, nutrition being much impaired, if not entirely suspended, and the patient dies without the supervention of any active disease; but by far the greatest number of deaths that have occurred under my observation, have resulted from complication with other diseases.

The most fatal of these complications is the occurrence of inflammation in the cerebral cavity. This may occur at any period of the disease, though the cases that I have witnessed, with few exceptions, took place early, say from the third to the sixth day. Those cases commenced and progressed for two or three days without apparent danger or violence, the patient thinking himself not sick enough to need a physician, until a partial coma alarms the friends enough to call a physician. The coma increases until it is difficult to arouse the patient, who is continually reaching for and catching at imaginary objects, pulling the bed-clothes and muttering to himself disconnected words and sentences. When typhoid fever becomes complicated with congestion or inflammation of the brain, the latter becomes the leading or principal disease, its symptoms being far more prominent and alarming than the fever which preceded. Of this class of cases, I have only seen a few recover; but, when convalescence was established, it was at an earlier period than would have been expected had the fever progressed without complication. That is, when the cerebral symptoms are relieved, the fever does not recur. I shall have a word to say on this subject under the head of hemorrhage.

Pneumonia is a more common though less fatal complication, a large proportion of typhoid cases recovering after its occurrence. It takes place in any stage of typhoid fever, though I

believe it is most common in the early or forming stage. Although the occurrence of pneumonia adds much to the peril of the typhoid patient, a large proportion of cases recover after its attack. Another complication or, perhaps, more properly, a consequence of typhoid fever is hemorrhage from the bowels. This is not so frequently met with as pneumonia, is much more dangerous, generally prostrating the patient in a few hours past all possibility of recovery. I have never seen hemorrhage from the bowels occur in typhoid fever until the latter disease was fully developed; and although large quantities of blood are sometimes discharged, I do not think it necessarily the result of organic lesion, relaxation of the mucous membrane being sufficient to allow any quantity of blood to escape, which we ever see evacuated by the bowels.

As mentioned under the head of cerebral complications, the primary discharge sometimes is relieved by the evacuation of blood from the bowels. It is, perhaps, easier to understand how the effusion of blood from the mucous membrane should relieve the system of disease supposed to be located in that membrane, than it is to see how inflammation or disease, in an organ remote from the primary seat of disease, should relieve that primary disease; but when we consider that the whole system is nurtured by nerves which spring from one centre, the mystery will as once be solved. An impression made on the nervous centre, either by disease or remedies, affects the whole nervous system, and may render the whole, or any part of it, unsusceptible to a local influence. Thus, typhoid fever may be rendered powerless by the influence of another disease acting through the medium of the nerves. I have no doubt that typhoid fever is frequently eradicated from the system in that way; but I do not consider it a desirable or safe way, as I have only seen one patient recover after blood in large quantity had been evacuated from the bowels.

The above-enumerated are some of the principal diseases with which typhoid fever may be complicated, but by no means all of them. I have only mentioned the most important, as regards the frequency of their occurrence, and their danger

when present. Any person will readily perceive that typhoid fever has, by its first morbid effect on the system, (namely, arresting, partially, nutrition,) not only rendered the system less able to resist the attack of a new disease, but it had also, in a measure, destroyed the restorative power, by reducing, through the want of nutrition, the vital forces. Under such circumstances, what is generally considered quite light and unimportant disease, assumes, to the experienced observer, a very grave importance; and he is prepared to see the system yield to ailments which, in a person in general good health, scarcely require medical interference.

In forming our prognosis of any case of local disease, we take into consideration the importance of the organ or tissue implicated, from which, with the amount of disease present or expected, we form our opinion of the result.

Now, if the view I have taken of typhoid fever be correct, the tissue implicated is a portion of the alimentary canal, which forms an important part of the apparatus that nourishes and sustains the whole system. There are then few diseases which are located in more important tissues than typhoid fever itself; and, when we consider the frequency of its complications and the inability of the system, when under its influence, to resist disease, we must say, that typhoid fever stands at or very near the head of formidable diseases in this country. I believe the disease is, through the country, generally, on the increase, some localities, however, being more subject to it than others. The towns of Newcastle, and Waynesville, and adjacent country were first visited with typhoid fever in 1846 and '7, at which time it was fatal in a large majority of the cases which occurred. Since then, it has been met with in all parts of the county, but it is more prevalent in some parts than in others. For instance, there has been for several years past more typhoid fever on Salt Creek, a stream which rises in or near the N.E. corner of McLean Co., than there has been in any other section of country with which I am acquainted. I do not know any local cause for the greater prevalence of the disease in that locality. I am not acquainted with the geological forma-

tion of the country well enough, to say there is no difference between that and more healthy localities; but, if there be a difference, it is not apparent to a superficial observer. I believe autumnal diseases are no more frequent in that region than in others.

That the geological formation of a country modifies the diseases of the same, I have no doubt. The army of the frontier has suffered this spring (1863,) from a disease which the surgeons call typhoid pneumonia, the fatality of which was truly appalling. The symptoms were, rigors, congestion of the lungs and brain, coma, and *death*,—many cases terminating fatally in less than forty hours. In the cases described, congestion was the leading symptom; but, in all cases where the disease was checked or arrested, the typhoid character was apparent; and, although the typhoid condition might be supposed to be the result of the congestion, the surgeons, generally, thought that the latter was the congestive stage of the typhoid disease.

Now, the geological formation there (the Ozark mountain region,) is entirely different from *our Illinois*. The soil is very loose and sandy, mixed with small irregular shaped limestone, giving it great facility to absorb water, and the same conditions being favorable for great evaporation. I should look for autumnal diseases to be prevalent on such a formation; and our army has found that the spring season is not exempt from serious disease. While autumnal diseases, such as diarrhœa, dysentery, intermittent and bilious fever have been prevalent in the army of the frontier, uncomplicated typhoid fever has not prevailed to any great extent, there being, perhaps, fewer cases than might have been expected in the same population at home.

In the treatment of this disease, I differ with many of my friends in the profession. I know that many physicians profess to *cure* typhoid fever; some of them say, that from four to six days is as long as it generally runs with them, unless it had progressed to something like maturity before they had it under treatment; but I also know that that degree of success is not universally allowed by the profession. The typhoid fever that

has come under my observation has always been an obstinate disease, running from three to twelve weeks to establish convalescence, no case yielding, according to my recollection, in less than twenty-one days. This is very different from the opinions expressed by many of our friends who have written on the subject, who state, that, by a particular treatment, they, generally, cut the disease short,—that is, cure it in a few days.

The plan of treatment which I have followed for several years past has been especially directed, first, to the correction of the supposed lesion of the intestines; and, next, to sustain the strength and vitality of the patient. After evacuating the bowels with a mercurial preparation, with which I frequently combine from one to three grains of quinine, I give nitric acid diluted to about the strength of good vinegar, in teaspoonful doses, repeated in four or six hours, according to the urgency of the case. Should the tongue become red or shining, I give turpentine in from twenty to sixty drop doses from two to four times a day, until the tongue resumes its natural color or until the unnatural redness disappears, after which, I resume the use of the nitric acid, and continue it, generally, until convalescence is established, unless it becomes necessary to suspend it to use other remedies. I have observed, that, when the redness of the tongue has been corrected by the use of turpentine, the exhibition of the acid prevented its recurrence, in some cases, through the whole disease, and, in all, its effects seemed to be beneficial.

I do not think that nitric acid possesses any specific power to control the intestinal disease, but benefits the patient by its tonic and invigorating action, thereby enabling the system more effectually to resist the influence of disease and, at the same time, promote the recuperative process. At any time, during the progress of the disease, that the secretions become deranged or deficient, I give calomel sufficient to restore them as near as possible, always discontinuing its use as soon as that particular object is attained. During the whole course of the disease, I consider it necessary to watch carefully the appearance of any new disease; and, if any such occurs, to relieve by judicious means, as soon as possible, the patient from the unpleasant complication.

To sustain as much as possible the strength of the patient, the diet should be nourishing, easily digested, and not stimulating. It should also be made up of a variety of dishes,—never allowing the patient to make a meal off one course. It should be taken, as near as possible, at the accustomed hour for meals, as it is thought that the digestion is more active at the regular periods than at other times.

Under this mode of treatment, this disease, although a formidable and dangerous one, is not more fatal than many other diseases which have less reputation for obstinate fatality. I cannot give the per cent of the fatal out of the whole number of cases, but I do not think it will exceed the fatality of pneumonia or dysentery.

ARTICLE XVI.

REPORT OF THE SPECIAL COMMITTEE ON DISEASES OF THE EYE.

By E. L. HOLMES, M.D., of Chicago. One of the Surgeons of the Chicago Charitable Eye and Ear Infirmary.

Read at the Annual Meeting of the Illinois State Medical Society, held at Jacksonville, May, 1863.

In offering this Report, your Committee on Diseases of the Eye cannot but deeply regret that the members of the Society, generally, have not manifested more interest in the important subjects for which the Special Committee was appointed. The attention of the profession was called to the subject by public and private notices, with the request, that members should contribute whatever they could of interest relating to diseases of the eye.

Your committee has received no communications from a single member, although, many friends of the Society must have had extensive experience in ophthalmic diseases, and could contribute valuable and interesting papers upon the subject. It should not be forgotten, however, that many of our most active members have devoted their whole time and energies to the

care of the brave soldiers which the State has sent into the field during the past two years. The Committee has, consequently, been left alone; and the following Report must, necessarily, be much more limited in scope than the importance of the subject merits.

Among the subjects in which we have for some time been particularly interested, and, in discussing which, we have sought the aid of the members of the Society and of the profession at large, we would mention "The Causes of Conjunctivitis in this State and North-West," and the "Prevention and Treatment of Sympathetic Ophthalmitis." Regarding the former of these subjects, we have comparatively little to say, since few facts have come to our knowledge in addition to those reported by your committee at the last meeting of the Society. Careful enquiry concerning the history of a very large number of patients, afflicted with severe conjunctivitis or its sequelæ, together with conversation with physicians practicing in different portions of the North-West, have confirmed the opinions expressed in our last Report,—that the chief causes of catarrhal ophthalmia, in this portion of our country, are found in the dry condition of the atmosphere, the bright light of the sun, rendered, possibly, more intense by this dryness, in the winds loaded with dust, and sweeping over the unbroken level of the country, and, especially, in the reckless manner in which the people expose themselves to the active causes of this disease. Several of these cases are, undoubtedly, the same which have always rendered the people of Egypt and Syria liable to conjunctival inflammation. In every portion of the world, we believe, where the climate and geological peculiarities of the country are similar to those of the North-Western States, the same diseases are prevalent. There is a popular opinion that the dust from the leaves of certain trees and flowers is one of the active causes of the disease in question. That the above are the chief causes, may be inferred from the fact, that the majority of patients examined were first attacked in the summer, when so much more exposed to these influences, than in colder seasons of the year. It is worthy of notice, that in Chicago and other places near

the lake, where the atmosphere is much more moist than in those situated at a distance from it, inflammatory diseases of the conjunctiva are comparatively rare. We have been informed by intelligent physicians, practicing in the southern and western portions of this State, that severe epidemics of this disease are quite prevalent in some seasons, nearly one-half of the cases which they are called upon to treat, being conjunctival diseases of the eye. During the past seven years, we have met with no epidemic conjunctivitis in Chicago.

One of the most obvious causes of conjunctivitis is contagion. To this cause may be traced the rapid spread of this disease among the soldiers of the European armies. As soon as proper means were adopted to seclude the infected soldiers, the disease was speedily eradicated. We have been informed by physicians practicing in different portions of Illinois and the North-West, that the manner in which the small dwellings of the people are often crowded with occupants, their careless habits, as regards cleanliness, tend to increase the number of victims of this troublesome disease. We have known repeated instances in which an individual was attacked with muco-purulent conjunctivitis, and, in the space of a few weeks, the whole family, varying, in number, from four to six members, became affected. There could be no doubt that the disease was communicated, in these cases, from one member to another, by the want of proper care in the use of handkerchiefs and towels.

An indirect cause of the spread of this disease is found in delay in seeking proper medical treatment, on the part of the patient, and too often in the insufficient or too severe treatment of the physician. It was our intention to make the treatment of conjunctivitis the special subject of this Report; and, although your committee have accumulated much material upon the subject, with the history of a large number of cases, we are not yet full prepared to furnish such a paper as the subject demands. At some future time, if it meets the approval of the Society, we propose to pursue this topic.

Several cases of sympathetic ophthalmitis have fallen under our notice during the past two years. The eyes, at our first

examination, were found so far disorganized as to render sight irretrievably lost. Undoubtedly, every physician of experience has either treated or observed patients who have become *entirely* blind, in consequence of an injury of only one eye. It is well known that in cases of certain injuries of the globe, especially punctured wounds, a chronic inflammation of the internal tissues of the eye supervenes, which is exceedingly difficult to overcome by any kind of treatment. After a time, varying from a day to six weeks, in a certain proportion of cases, the other eye becomes affected with a peculiar form of inflammation, principally involving the *iris, choroid, and retina.* This inflammation, at first, is usually quite slow in its progress, and is attended with pain in and around the eye with loss of sight. Regarding the serious character of this disease, MACKENZIE says: "Whenever I see sympathetic ophthalmitis, even in its first stage, I know I have to contend with an affection which, however slight its present symptoms may be, is one of the most dangerous inflammations to which the organ of vision is exposed. I have very seldom seen an eye recover from sympathetic ophthalmitis."

The curative treatment of this disease, which is now most successful, is said to be the removal of a piece of the iris, as now so highly recommended in glaucoma. We have never had an opportunity of trying it, and can, therefore, say nothing from personal experience. The preventive treatment of sympathetic ophthalmitis, which has been found, by experience, most reliable, consists in the partial or total extirpation of the injured eye, before the least symptoms of inflammation has appeared in the other. For favorable notices of this operation, we would refer to various medical journals, especially *London Ophthalmic Hospital Reports*, and *Archive of Ophthalmology.*

There are three classes of cases, according to GRÆFE, in which sympathetic ophthalmitis is especially liable to occur.—1st.—When a foreign body or a dislocated and enlarged lens is a source of irritation in one eye. 2d.—When internal disorganization is progressing, with increased outward pressure of the fluids of the eye, rendering the walls of the globe more

tense than natural. 3d.—When, in commencing atrophy of one eye, (from chronic inflammations of iris and choroid,) there is tenderness, on pressure, over the region of the ciliary processes. It is impossible, however, to foretell in what cases the sympathetic inflammation will or will not make its appearance. Many patients escape after long attacks of disorganizing inflammation; but we believe it is safer, in *all* cases where vision is destroyed, to resort to the partial or total extirpation of the eye, before the symptoms of disease appear in the other eye.

We think, any one who has had much experience in treating injuries of the eye, must be fully convinced that many patients, with penetrating wounds of the cornea and lens, attended with prolapsus and inflammation of the iris and choroid, and with loss of vision, would escape much distress by resorting immediately to the surgical treatment mentioned above. Patients, however, almost invariably feel great repugnance at the "thought of having an eye cut out," and will seldom submit to an operation, till worn out with excruciating pain, and loss of sleep, and threatening loss of health.

The method of removing the eye, as introduced by CRITCHETT, and now recommended by many ophthalmic surgeons, is simple and, usually, without danger.—A circular incision is made through the conjunctiva, parallel to the cornea, and the recti-muscles severed close to the sclerotica, as in the operation for strabismus; the conjunctiva is then separated from the sclerotica, and the optic-nerve divided by a pair of blunt-pointed curved scissors passed behind the globe, when the eye can be readily removed from the orbit and the operation finished by cutting the oblique muscles. It is, occasionally, advisable to enlarge the palpebral fissure by slitting the tissues at the external angle, especially when the eye is hypertrophied. The operation, as thus performed, leaves the muscles and nearly the whole conjunctiva. The wound usually heals in about a fortnight, leaving a "stump" suitable for an artificial eye. In many instances, the excision of the cornea is sufficient. It is not, however, always reliable, for the inflamed choroid and adjacent membranes may continue a source of irritation, which will be

difficult to relieve. Moreover, the operation is not unfrequently followed by serious hemorrhage, since the inflammation has caused an enlargement of the vessels of the retina and choroid. The walls of these vessels, especially those of the retina, are exceedingly delicate, and often rupture "spontaneously" when the pressure of the humors within the globe is removed, as, in excising the cornea. The operation for the extirpation of the eye is almost entirely free from this objection, as it is seldom attended with much loss of blood. We dwell somewhat at length upon this point, because many physicians seem ignorant of the terrible consequences liable to follow certain inflammations of one eye. We are confident sight could have been preserved in six cases we have noticed, by the operation above indicated, where, by its omission, total blindness was the final result. In three cases of injury, where we had advised the operation and the patients had disregarded our council, they returned, after three or four months of excruciating pain and vain efforts to obtain relief, with general health much impaired by suffering and loss of sleep, and requested us to do as we deemed best.

It is impossible for your committee, within the limits of this Report, to present a detailed account of all the advances which have been made during the past few years in ophthalmic science. We must, however, call the attention to a few points which are of particular importance, referring, for their full discussion, to the original articles of those writers, who are regarded as high authority. The subjects of Glaucoma and the Ophthalmoscope are each worthy of a paper more extended than this Report. The medical literature of our own language is now quite rich in translations from foreign languages or in original contributions on these subjects; and we can, for the present, only refer the members of the Society to them.

A modification in the operation for the extirpation of hard cataract, ably discussed in a recent pamphlet by MOOREN, will reduce the danger attending this delicate operation, if we may judge from reported cases and from the results of two operations performed by your committee. The modification consists in removing a small section of the iris, as in performing the

operation for artificial pupil, and, a week or two after, extracting the lens in the usual way. Although the pupil will, of course, be larger than natural and of an abnormal shape, the lens escapes so readily, without undue violence to the iris, that the danger of subsequent inflammation is greatly reduced.

The whole subject of accommodation of the eye to different distances, and the diagnosis of diseased condition of this function, with the use of lenses, should be carefully reviewed by every physician. The works of DONDERS, GRÆFE, WELLS, and KNAPP deserve special study.

The subject of "Astygmatismus" or difference of convexity of the cornea or lens in their different merideans, first analyzed, we believe, thirty or forty years ago by YOUNG and AIRY, is of particular interest, and has been treated, at length, by DONDERS, KNAPP, and others.

We cannot omit a short notice of a simple operation, which will prove of great benefit in certain cases of chronic inflammation of the conjunctiva with granulations, and the secondary afflictions produced by them. In many cases of these diseases, the palprebal fissure becomes diminished in size, and the lids press unduly upon the cornea in consequence of spasmodic contractions of the orbicular muscle. The double operation consists, first, in elongating the palpebral fissure at the external commissure, by an incision of a couple of lines or more in length through the conjunctiva and integument. To prevent re-union, a couple of stitches are necessary for uniting the conjunctiva and skin at the angle of the incision. The spasm is still further reduced by the second step of the operation, which is the introduction of two or three tightly drawn vertical ligatures through a fold, embracing the integument and muscle of the lid. The ligatures ulcerate out in a week or ten days. Excellent observations upon this operation can be found in the valuable work (Part I, pages 6 and 7,) of PAGENSTECHER and SÆMISCH, of Wiesbaden, published in 1861. To Dr. E. WILLIAMS, an able and well-known oculist of Cincinnati, is due, we believe, the credit of devising, independent of GAILLARD and PAGENSTECHER, the operation above described.

Your committee take pleasure in referring to the efforts of Dr. HOMBERGER, of New York, to establish a journal of ophthalmology in the United States. Such a journal, in the present rapid advances in ophthalmic science, is a much needed acquisition to our professional literature. We believe Dr. HOMBERGER, from his knowledge of the details of ophthalmic practice as observed in Europe, and his acquaintance with the ophthalmic literature of all the important European languages, will make the journal what the wants of the profession require. We heartily commend the enterprise of Dr. HOMBERGER to the support and encouragement of this Society and of the profession at large.

We would call the attention of the Society to the continued prosperity of the "Chicago Charitable Eye and Ear Infirmary," which has now been in operation five years. The organization consists of a Board of twelve Trustees, of two Consulting and two Attending-Surgeons. During the past two years, there have been 644 patients under treatment,—making an aggregate of 1224 since the opening of the Infirmary in 1858.

The Infirmary is a charitable institution, and is intended for the poor patients of the whole North-West as well as of Chicago. In nearly every large European city, and in the larger cities of the Eastern States, infirmaries have been established for the treatment of the poor suffering from the diseases of the eye or ear; and supported not only by private munificence, but also by ample grants from the State. The sum of nearly $100,000 was raised by subscription in the Cities of New York and Boston for their respective infirmaries. "There is urgent need of a similar institution in Chicago. The city is already the most important point in the North-West in every thing that relates to commerce and wealth. Every year is rapidly adding to the population of the city as well as the influence which it is exerting upon the growing country around. The inhabitants of the North-West, more especially the poor, who are particularly exposed to all the causes of this class of diseases, are more liable to diseases of the eye than those of almost any other section of the country." The members of this Association

should remember that the treatment of ophthalmic diseases is one of the most important fields of labor in which the physician can devote his energies. The medical student, especially the one who intends to practice in the country, should understand thoroughly the diagnosis and treatment of the ordinary inflammatory diseases of the eye. By no means can he well prepare himself for this branch of practice, as by regular attendance upon the clinics of a well-organized eye infirmary. Your committee would, therefore, urge upon the Society a careful consideration of the claims of the Infirmary at Chicago, as a public charity and a means of extending a knowledge of diseases of the eye and ear among medical students, and ask for it such encouragement and support as the members of the profession are able to give.

CEREBRO-SPINAL MENINGITIS.

By N. S. DAVIS, M.D.

We cannot better answer numerous letters that we have received, inquiring in relation to the best mode of treating a disease which has prevailed very severly in some localities in the North-West, during the past year, than by publishing the following observations. The disease has been called by different names; and it is quite certain that different diseases have been sometimes confounded together. In a recent number of the *Boston Medical and Surgical Journal*, we find eight cases, with *post mortem* examinations, reported by Dr. UPHAM, under the head of "Congestive Fever" or "Cerebro-Spinal Meningitis." At the conclusion of his cases, he sums up the symptoms as follows:—

"In its *mode of attack*, the disease was commonly sudden and without premonition, the patient, for the most part, continuing on duty and making no complaints till the very day of his seizure. Some of the most violent cases thus commenced; Case XII, previously cited, is, in point, where the soldier appeared with his company at the evening dress parade, com-

plained of chilliness, headache, &c., during the night, and was dead within thirty-six hours following. And the subjects of the disease, in most cases, were those previously in the fulness of robust health,—between the ages of 18 and 24,—who had endured hardships and exposures with impunity.

"The *symptoms* were, at the first, headache, referred oftentimes to the back part of the head particularly, with dizziness,—pain in the back and limbs, this last, occasionally, of an excruciating character,—with, sometimes, rigors, and nausea, and vomiting. Chilliness, rather a well-defined chill, characterized the accession of the disease. A peculiar stiffness in the muscles of the face and neck was often an early symptom; this would be followed by local spasms, perversion of vision, &c. In some cases, the initiatory symptoms were those of a severe cold, with a disposition to paralysis of the tongue and a portion of the muscles of the face. With this the respiration would be difficult and irregular, giving occasion to fear a congestive attack of the lungs. There was often tenderness at the nape of the neck and along the spine early in the disease. The skin was, usually, moist, but hot. The face was suffused,—of a dusky hue,—and the features distorted in the manner before mentioned,—the eyes congested and suffused. There was not, for the most part, active delirium,—but perversion of intelligence rather, and dulness and indifference to outward objects, from which condition the patient could be roused and made to answer questions consciously. The tongue had, at first, a white creamy coat, which, in the course of the disease, became yellowish or brown at centre and base, more rarely dry and cracked towards the close. There was loss of appetite, but, usually, not very urgent thirst. The heart's action was irregular, sometimes tumultuous, to which the pulse did not always respond, being mostly accelerated, but not strong,—occasionally intermittent. The bowels were regular, or inclined to diarrhœa and costiveness by turns. Petechiæ were not an unfrequent manifestation,—in appearance almost identical with the true typhus eruption, and, like that, seen upon every part of the body, except the face,—persistent on pressure, varying in hue from the darkest aspect of the measles to that of the true petechial spots imbedded in the skin. Purpural spots, abundant and of large size, were sometimes present, and were always a grave symptom. There was no marked tenderness of the epigastrium or abdomen. In the cases of longer duration, there was, in the last stages, sordes on the teeth and lips, and involuntary evacuations of urine and fæces. The patients often die without much symptoms of ex-

haustion. The decubitus was mainly on the side, with the head not unfrequently thrown back,—the neck rigid and stiff,—a partial opisthotonos. There was, uniformly, great restlessness and jactitation. As an accompaniment and occasionally a sequel to the disease, iritis was several times observed. So, also, was synovitis,—and, in one instance, pericarditis. The above are among the more prominent and constant symptoms,—but there was a considerable diversity in the manifestations of the disease during its progress, whether towards a favorable or fatal result; in no one case do I remember to have seen even a majority of those I have enumerated present.

"Singular and anomalous symptoms were sometimes noticed. Dr. Jewett, Surgeon of the 51st Mass. Regt., to whom I am indebted for a clear and able account of the disease, as it occurred in the troops under his care, reports that 'in a single case, a pleasing delirium was noticed, with loquacity and decidedly erotic desires, accompanied with priapism more or less extensive during the greater part of the disease.' This peculiarity, he adds, was noticed in about one-third of his cases. Dr. Cowgill alludes to the same fact. Dr. Jewett noticed the decubitus upon the dorsum among fourteen cases which occurred in the 51st Mass. Regt. in but a single instance. 'In all the others,' he observes, 'the patients lay upon the side till near the close of life.' 'In a few cases, and those the most severe ones,' he also remarks, 'no moan or sound of any kind escaped the patient, but there was a fearful restlessness, which ceased only at death; in others, there was much moaning.' Stiffness of the muscles of the face, before alluded to, amounting at times to spasm, was almost pathognomonic. In some form, this affection was present in nearly all the cases sent in by Dr. Ware; it was common in those treated in Academy Hospital. Dr. Jewett speaks of it as being present in fully one-third of the cases which came under his observation, 'there being,' as he says, 'more or less stiffness of the muscles of the neck and back, with opisthotonos,—in one case, paralysis of the glosso-pharyngeal nerve, and, in two others, eversion of the eyes and occasional squinting.'

"The *duration* of the affection varied from a period of less than thirty-six hours, to that of three, four, or six weeks, and even longer. According to my own observation, the more usual duration has been from three or four to seven days."

From the foregoing detail of symptoms, given by one of the most accurate observers of the present time, it is evident that

the cases of disease called "Cerebro-Spinal Meningitis," vary much in their symptoms, rapidity of their progress, and in their results. It would seem that the most constant and characteristic symptoms are, sudden and severe pain in the head and back; great restlessness, especially in paroxysms; either mental depression or delirium; more or less rigidity of the muscles of the neck, and often of the back and extremities; and a hurried and variable condition of both circulation and respiration. The disease is often so rapid that it terminates fatally during the second or third day after the attack, while, in a few instances, it lingers several weeks. The *post mortem* appearances are almost as variable as the symptoms during life. In a majority of cases, a sero-purulent fluid is found in the ventricles and under the base of the brain, with a white crudy or membraneous exudation on the surface of the pia mater, constituting evidence of a rapidly suppurative inflammation; but, in other cases, no trace of disease is visible in any part of the brain or its membranes. Thus, in one case related by Dr. UPHAM, the only important pathological condition present on the *post mortem* was the existence of six or eight ounces of a sero-purulent fluid in the pericardium. In other cases, the lungs suffer most, and are often found extensively congested or hepatized. When the disease prevails, epidemically, its course is, generally, more rapid and fatal than almost any other disease with which the practitioner has to contend. We were informed by a medical friend, a few weeks since, that in one locality in the southern part of Indiana, an epidemic had prevailed during the past spring, of such severity that more than sixty deaths took place in the practice of a single physician within a few weeks. The more prominent symptoms, as described to me, were, sudden and severe prostration, with fever, soreness and stiffness in the fauces and muscles of the neck; pain in the head, neck, and chest; suffusion of the eyes; frequency of pulse and respiration; more or less muscular rigidity; delirium; petechial or purpuric spots on the surface; and death, generally, in from two to six days.

It will be remembered that, about twenty years since, a very

fatal epidemic prevailed in many parts of the Middle and Western States. It was styled the "Black Tongue," in the newspapers. As it appeared in the interior of New York, the great majority of cases presented all the characteristics of a malignant erysipelas,—attacking, first, the throat and extending rapidly over the face, head, neck, and sometimes a large part of the surface of the trunk of the body; but, in numerous instances, instead of developing external erysipelatous inflammation, the soreness of the fauces was quickly followed by delirium; muscular twitchings or rigidity, especially in the muscles of the neck; frequent pulse; hurried and irregular breathing; restlessness; great prostration; and death. In Michigan and other highly-malarious districts, the latter form of the disease was the most prevalent. In all these cases, where *post mortem* examinations were made, sero-purulent effusions, membranous exudations, and the indications of inflammation were found in the ventricles, and under the base of the brain, and on the medulla oblongata. Hence, in the localities in which this form of disease was present, it came to be recognized and described as an epidemic,—cerebro-spinal meningitis. During the prevalence of that epidemic, we were practicing in Binghamton, N. Y., and but few cases occurred in that town. During the whole fourteen years that we have resided in Chicago, no epidemic of this disease has prevailed in the city or its immediate vicinity. From the middle of March to the first of June, of this year, cases of erysipelas were of much more frequent occurrence than usual; and many of the cases were accompanied by symptoms of unusual malignancy. About the middle of June, we were called in quick succession to such a number of cases presenting symptoms of cerebro-spinal inflammation, that we became apprehensive that they formed the beginning of an epidemic prevalence of the disease. The three following cases will sufficiently illustrate both the symptoms and treatment of the disease as it has presented itself, in our practice, during the last thirty days:—

Case I.—A boy, aged about 12 years; nervous temperament, and rather feeble constitution, was attacked with headache

sufficient to cause him to leave the school-room on the 13th of June. The next morning he was better, and made a visit to some friends a few miles in the country. He returned home on the afternoon of the 15th; and, after walking from the railroad depot to his father's residence, he complained of feeling tired; and, in the evening, was attacked with violent pain in the head, neck, and back,—but most severely in the head. I saw him at 9 o'clock the same evening: I found him lying partly on his side, with a sad and anxious expression of countenance; skin dry and moderately hot; pulse 120 per minute, but soft; tongue slightly coated; and bowels quiet. He complained of severe pain in the head, with soreness of the throat and stiffness of the muscles of the neck. There were frequent muscular twitchings in the extremities, with nausea and efforts at vomiting whenever he attempted to assume the upright position. The parents thought the sickness was caused by injudiciously eating fruit in the country. They were assured, however, that the symptoms strongly indicated a serious degree of irritation in the base and central parts of the brain.

About three hours later, a severe paroxysm of general convulsions occurred, followed by increased rigidity of the muscles of the neck, constant tossing of the arms, moaning, redness of the eyes, and complete stupor, with dilitation of the pupils. Five hours later, he remained unconscious; conjunctiva injected and pupils dilated; head moderately hot; pulse 130 per minute, and weak; bowels had been freely moved; the extremities cool, and lips pale; more decided rigidity of the muscles of the neck; and slight drawing of the head to one side; and almost constant irregular action of the muscles of the extremities.

Seven hours later, the general symptoms remained the same, except the constant rigidity of the muscles of the neck had extended also to those of the shoulders and upper extremities, fixing the arms firmly against the sides of the chest, and the forearms moderately flexed; but the lower extremities were still being constantly tossed about. Six hours later, all muscular agitation or tossing had ceased, but some rigidity of the muscles of the neck and arms remained; the pulse had become extremely

frequent, variable, and weak; the respiration irregular, with mucus accumulating in the air-passages; slight involuntary discharges of both urine and fœces; deglutition suspended. Respiration, circulation, and muscular action continued steadily to diminish until the patient died, about thirty-six hours from the time that his symptoms attracted serious attention. No *post mortem* examination was allowed. The treatment of the case consisted in cold applications to the head, a pillow of pounded ice to the occiput and back of the neck, a mercurial purgative, followed by moderately full doses of iodide potassa and belladonna; and, after the first eighteen hours, quinine and other remedies were prescribed; but the difficulty of deglutition had become such that very little was actually swallowed.

Case II.—I was called to see Mrs. H., a native of Ireland, aged about 36 years, the mother of several children, on the afternoon of June 17th, 1863. Found her suffering intense pain in the head and upper part of the spine; anxious expression of countenance; position dorsal, with inclination to right side; rigidity of the muscles of the neck and flexors of the hands and feet, so as to draw the thumbs into the palms of the hands and fix the fingers and toes in a state of semi-flexion; pluse 120 per minute and small; surface of the head and trunk above the natural temperature, but extremities cool; respiration hurried and somewhat irregular; tongue covered with a white moist coat; and bowels quiet. On inquiry, I learned that the patient had complained of pain in the head for two days past. Twelve hours previous to my visit, the pain in the head had become greatly increased, accompanied by a general convulsion, lasting only a few seconds, and since which time she has lain in the condition she was found on my arrival. I should not omit to state, that the convulsive paroxysm in the morning was immediately preceded by vomiting, and that nausea and efforts to vomit had occurred several times during the day, more especially when any attempt was made to change the position of the patient. I directed the head and back of the neck to be covered with a sac of pounded ice, and dry warmth to the extremities. Directed to be taken internally, calomel, 3 grs., bi-

carb. soda, 3 grs., every two hours until the bowels were evacuated. I also directed fifteen drops of tincture of belladonna to be given in connection with one drachm of the *sulphite* of lime every two hours. Eighteen hours after the commencement of this treatment, I found her with less pain in the head and back; expression of countenance less anxious; muscular rigidity of the extremities less, but not entirely gone; fœces and urine had both passed freely in bed, without the control of the patient; and the pupils were moderately dilated, but whether from the effects of the belladonna or the disease it was not easy to decide. The calomel and soda was discontinued; the sulphite of lime and tincture of belladonna continued in the same doses, but at intervals of once in three hours, and six grains of iodide of potassa dissolved in camphor water given half way between. The cold applications were also continued to the head and neck.

June 19th.—3 o'clock P.M., all the symptoms improved. The rigidity of the muscles of the extremities had entirely ceased; the pain in the head and the stiffness of the muscles of the neck continued slightly; pulse 90 per minute; fœces and urine passed naturally; and patient cheerful. The pupils of the eyes were dilated and the throat dry, evidently, as the effects of belladonna. The doses of sulphite of lime and belladonna were now reduced to half a drachm of the first and eight drops of the last, given every four hours, alternated with the iodide of potassa. The ice cap to the head and neck was exchanged for simple cloths wet in hydrant water. Animal broth given in small quantities, at short intervals, for nourishment.

June 20th.—The patient appears to be entirely convalescent. While lying quiet, she feels no pain, and shows no stiffness or rigidity of the muscles, though there is a general of soreness in the flesh, great weakness, and, when she moves, the head is light and giddy. Continued the sulphite of lime and belladonna at intervals of once in eight hours, but omitted all other medicines. Allowed a more liberal use of nourishment, consisting of beef-tea, milk-porridge, &c.

June 22d.—Found the patient sitting up half an hour, and convalescence fully established. Ordered twenty drops of

muriated tincture of iron to be taken at each meal-time as a tonic, and omitted all other medicines. The patient has since continued well.

Case III.—June 17th, at 4 o'clock P.M., I was called urgently to 114 West Jackson Street, to see a child about two years old, reported to have "cramps." I found the child lying in a recumbent dorsal position, inclined towards the left side; the face flushed; eyes suffused; head hot, and drawn moderately to the left side by rigid contraction of the muscles of that side of the neck; respiration hurried, and sometimes moaning; pulse small, tense, and frequent; frequent muscular twitchings, and, apparently, delirium. I learned that, during the latter part of the preceding night, the child had become hot, restless, and subject to sudden startings. The restlessness and fever increased until about 9 o'clock A.M., when there was a moderate general convulsion, after which, the child remained in the same condition as I found it at 4 o'clock P.M. I prescribed the same remedies, in all respects, as in Case II., only suiting the doses to the age of the child; and the result was the same, namely, the complete recovery of the patient in about one week.

During the two weeks intervening between the 15th and 30th of June, four other cases of a similar character occurred in my practice, two adults and two children. All but one were in the western division of the city. The symptoms presented in these cases led me to regard them as genuine attacks of cerebro-spinal disease; while the rapidity with which they followed each other, and preceded by an unusual prevalance of erysipelas, caused me to seriously apprehend the commencement of an epidemic cerebro-spinal meningitis. Hence, after the speedy termination of the first case, I used, in the treatment of subsequent ones, such remedies as previous reflection had satisfied me would be most likely to prove beneficial in that disease.

From all the facts I have been able to gather concerning the symptoms, progress, and *post mortem* appearances in the epidemics of cerebro-spinal meningitis that have occurred at various periods of time and in numerous localities, I am constrained to regard the disease as an asthenic inflammation of the cerebro-

spinal nervous centres with their investing membranes, accompanied by a highly *septic* condition of the blood and consequent rapid failure of the vital properties throughout the whole organization, with the equally rapid formation of sero-purulent effusions at the seat of local inflammation. That such a septic condition of the whole mass of the blood actually exists, is proved by the frequent appearance of dark red and purpuric spots on different parts of the cutaneous surface, the early formation of sero-purulent effusions and infiltrations, and the rapidly fatal results. Further observations may show that it holds the same relation to erysipelas as is claimed for epidemic purpural peritonitis. If we admit the correctness of the pathology just stated, it affords a basis for three rational and well-defined therapeutic indications, viz.:—

First.—To introduce, as rapidly as possible, such remedies as will neutralize or destroy the *septic* condition of the blood.

Second.—To counteract or diminish the vascular turgescence or accumulation of blood in the cerebro-spinal centres.

Third.—To maintain the depurative processes by which the system is relieved from the presence of effete and offending matter, by increasing the activity of the excretory organs.

The experiments of Dr. POLLI, with the sulphites of lime and soda, to which allusion has been made in former numbers of this Journal, together with the experience I had acquired with the first of those salts in the treatment of malignant erysipelas, caused me to resort to the sulphite of lime as the agent most likely to efficiently counteract the septic state of the blood, and fulfil the first indication named. If one of those severe and fatal epidemics, such as has been described as prevailing in some parts of the country, and, quite recently, in the vicinity of Philadelphia, I should, not only, exhibit the remedy in full doses to those actually attacked, but should give moderate quantities to such well persons as were immediately exposed in families and houses where some were already sick, to test its prophylactic virtues. While using this or such other remedies as experience may prove to be efficacious, for the purpose of correcting the septic or faulty condition of the blood, I should

endeavor to lessen the local inflammatory action by such remedies as increase the *contraction* of the cerebro-spinal capillaries, and thereby lessen the accumulation of blood in those parts. For this purpose, belladonna given internally, in such doses as will speedily induce, in a moderate degree, its specific effects on the pupils of the eyes and the fauces, aided by the constant application of pounded ice to the occiputo-cervical region, constitutes our most reliable resource; for I am fully satisfied that the views of Dr. BROWN SEQUARD, in relation to the action of belladonna, ergot, &c., are correct; and, if so, all the preparations of opium and alcoholic liquids, by their tendency to dilate the cerebro-spinal capillaries, and thereby favor the accumulation of blood, are decidedly *contra-indicated* in the treatment of the disease under consideration. In a disease so severe and rapid in its course, we should not only endeavor to correct the morbid condition of the blood, and lessen the accumulation of blood in the parts involved in local inflammation, but the excretory functions should also be carefully maintained, for the double purpose of aiding to lessen the determination of blood to the head, and of favoring the expulsion of any effete or poisonous material that may exist in the system. For this purpose, I prefer calomel and bi-carbonate of soda, sufficient to move the bowels, to be followed by full doses of iodide potassa.

Such are my views, very briefly expressed, concerning the nature and treatment of the epidemic form of cerebro-spinal meningitis.

AN ORGANIC BASE WITHOUT OXYGEN.—M. Rieth has extracted an alkaloid from the bark of the *arariba rubra*, a Brazilian tree. This new alkaloid, which has received the name *aribine*, possesses the remarkable property of containing no oxygen, being the first instance of a solid, non-oxygenous, organic base in nature. The composition of aribine is expressed by the formula C46 H20 N.—*Rep. de Pharm.*

ARTICLE XVIII.

DISLOCATION OF ANKLE, WITH COMPOUND FRACTURE OF THE TIBIA AND FIBULA.

Reported by JAMES S. KING, M.D., of Lemont, Ill. Formerly Resident-Physician St. John's Hospital, Cincinnati, Ohio.

July 24th, 1862.—Was called with Dr. HALL, of this place, to see M. S., a healthy Irish boy, æt. 20, reported to have broken his leg. On arriving at his residence, we found the limb in the following condition:—The tibia protruding about two inches through a transverse lacerated wound, extending about an inch on either side of internal malleolus, which remained *in situ* upon astragalus being fractured from tibia. Fibula fractured about two inches above articulation, lower fragment being driven inwards and upwards; upper portion of bone protruding through a longitudinal lacerated wound of about an inch and a-half in length, commencing just above external malleolus and extending upwards; foot turned outwards and at nearly a right angle with leg; anterior and posterior tibial arteries uninjured. Patient's general condition good,—pulse but little accelerated; and he seemed in good spirits notwithstanding the severity of his injuries, caused by the falling of a horse upon him in the quarry, about one hour previous to our seeing him. His ankle was caught between the side of the horse and the sharp corner of a rubble stone.

As his parents were decidedly opposed to having his limb amputated, we determined to try conservative surgery upon the case; and proceeded to reduce dislocation, having first placed the patient fully under the influence of chloroform. We had considerable trouble to get the parts into proper position, but at last succeeded, without sawing any of the bones. Placed limb in Pennsylvania Hospital fracture-box; ordered cold water dressing; left opiates to allay pain; and requested consultation for next day, which being consented to, we telegraphed for Dr. DAGGET, of Lockport.

July 25th.—Found patient feverish,—pulse about 100; com-

plains of great pain in ankle, notwithstanding the opiates. Gave him morphine, nitre, and ipecac; ordered a cathartic. Dr. DAGGET thought we had best continue cold water dressing to limb,—thought that the limb could be saved.

July 26th.—Patient about as yesterday. Continued treatment. His mother now raised a hue and cry about the doctor's bill. Said, she would not have two doctors visiting him every day. The case was passed to my care.

July 27th.—Patient less feverish; wound looks well; does not complain of so much pain.

July 31st.—I have visited patient every day since 27th, he is doing well,—but very little febrile action; but little pain in ankle,—wound in good condition. The old lady now declared I should not visit the boy any more until she sent for me. I tried to convince her of the necessity of my attendance, but she persisted in her determination, and I left the case to nature and an Irish woman,—very incompatible agents by the way.

August 5th.—Was sent for in great haste: boy reported very bad. I refused to go, except in company with Dr. HALL, to which they very reluctantly consented,—the doctor's bill being the bugbear. We found patient with high febrile action,—pulse 120; limb hot and swollen; wound covered with unhealthy looking pus; patient restless and complaining of great pain in joint. The old lady had discontinued the use of water dressing after we left the case. We dressed the limb; ordered warm applications to wound; gave patient Doveri, ipecac, and nitre; ordered lemon-water and beef-essence. Requested that Dr. DAGGET should see the case on next day.

August 6th.—Repaired to house of patient, in company with Dr. DAGGET. Prepared to amputate limb, if condition of patient was not better than on yesterday. On arriving, found patient comparatively comfortable; but little febrile action; limb not so much swollen,—suppurating freely; appearance, every way an improvement upon yesterday. On consultation, we determined to try conservative surgery a while longer. We gave the old lady full directions as to what she must do, after which, she concluded that she could get along without us,—said, she

would send for me if she needed me. I told her, I would visit the boy as I thought best or not at all, to which she would not consent, and I left the case.

December 11th.—M. S. came into my office, walking without crutches. Upon examination of limb, found the foot somewhat turned inwards upon ankle, caused by the limb having been allowed to lie in that position in fracture-box. Says, he has but little pain in joint, but that it it very weak. Found an opening of about a-half of an inch in extent over internal malleolus, from which there is a constant but small discharge of pus, caused by the presence of dead bone which he refused to let me remove; also found a small opening over region of fracture upon the outer side of limb, from which he says he took quite a large piece of bone about a month ago. He has been walking without crutches about six weeks. After I left the case, he had no treatment, except that his mother had followed the directions we had left; and he had been to Lockport once since he was able to walk.

July 3d, 1863.—M. S. came into my office. On examination of limb, found foot in about same position it was last December. Motion at ankle-joint antero-posteriorally about one-fourth of what it is in normal condition of joint, laterally, about as of other limb. Wound over internal malleolus entirely healed; says, that several pieces of bone came out of the wound about a week after I saw him in December. Upon examination of the bones which he gave me, I found them to be the internal malleolus, together with splinters of bone from tibia. Wound upon exterior of limb still open, from which there is a small discharge of pus, caused by some portions of dead bone, but, as it does not pain him, will not permit me to remove it. He now gave me the bone which came out of his wound last November; find it about half of an inch in length, and to be a portion of the lower fragment of fibula. He says, he now works on the farm, finds joint still weak, but it is improving all the time; sometimes has considerable pain in it, evidently, of a rheumatic character. Says, he would not give the present limb for a hundred wooden ones.

Selections.

LECTURES ON DISEASES OF THE EYE.

By HENRY D. NOYES, M.D., Assistant-Surgeon N. Y. Eye Infirmary.

DISEASES OF THE LACHRYMAL APPARATUS.

Diseases of the Lachrymal Apparatus.—The lachrymal sac and nasal ducts are the parts of the derivative apparatus which are most frequently diseased. The primary affection is usually *catarrh* of the mucous membrane.

This may originate from inflammation of the eyelids or of the Schneiderian mucous membrane. It often occurs in young children of a scrofulous constitution simultaneously with catarrh of the nasal passages, and it may take place as an acute attack at any period of life. It more usually comes on gradually, its incipient stages being scarcely observed. The secretion of the mucous membrane, which is naturally thick and glairy, becomes more consistent and opaque; it accumulates in the sac, and gives rise to a slight fulness at the inner angle of the eye. Pressure causes the swelling to subside by pushing the mucus into the nostril or into the conjunctival sac. There will be slight congestion of the palpebral conjunctiva. The eye will be filled with tears, and, on exposure to the wind, they will flow copiously over the cheek. The mucous membrane of the sac and duct is swollen and spongy, and the calibre of the nasal duct is diminished. The valvular folds of the membrane become tumefied, and oppose a decided obstacle to the flow of fluid into the nasal fossa. Hence, before organic stricture has formed, pressure over the distended sac will often cause its contents to regurgitate upon the conjunctiva.

Soon, however, the infiltration of the mucous membrane assumes a more organized form, because this tissue is a fibro-mucous layer. Fibrous tissue appears in it, and constitutes a permanent stricture. Its situation may be at any point of the duct, or through its whole extent; its common seat is at the valvule which marks the beginning of the duct. The formation of such a stricture is a very slow process; and, during this time, the patient is more or less annoyed by catarrh of the lachrymal sac. The sac becomes more and more distended, and its lining membrane more and more deeply diseased, giving rise to an abundant secretion of muco-pus.

It may attain an extraordinary size,—a hazel-nut might, in many instances, be accommodated within it. Pressure on this tumor evacuates its contents chiefly through the puncta. It may be painless, and continue for a long time in a passive state. But suddenly a new phase presents itself: acute inflammation is set up, and abscess forms. This may occur at various stages of the malady, either before or after the lachrymal sac has become distended enough to deserve the name of mucocele. The abscess forms in the loose areolar tissue around the sac, and soon ulcerates into it. It produces great swelling of the integuments. Especially in the sulcus, below the lower lid, the skin is tense, red, and hot; pain is severe until the pus has diffused itself into the areolar tissue. The pus tends to run along the loose tissue of the lower lid. If left to itself, the skin finally ulcerates, and the matter is discharged. Relief follows, but this is too often only the beginning of sorrows. From the opening, both pus and tears escape, showing a communication with the lachrymal sac. An ulcerated opening is very liable to remain patent, and result in fistula lachrymalis. This becomes not only a disfigurement but a source of continual annoyance. A succession of abscesses may occur; or the opening may close, pus form again, and make for itself a new exit, the suppurative process continuing for weeks.

A lachrymal fistula is not always an offensive opening, filled with fungous granulations; it may heal so far as to leave but a minute, almost capillary, aperture. Even in this state, it gives great trouble. Tears flood the eye, the conjunctiva is inflamed, and use of the eye is almost impossible.

I need not attempt to describe these cases any further. They are of chronic character, and have no tendency towards cure. If the nasal duct is obstructed, and this need only be a partial obstruction, it is the sufficient cause of a long train of annoyances, and of liability to intercurrent attacks of inflammation. Sometimes the nasal duct becomes totally occluded; it may be filled by bony tissue. The mucous membrane may be converted into pyogenic membrane. The lachrymal or maxillary bones may become carious. St. Yves speaks of operating for caries of the bones at the bottom of the orbit, and of the danger of destroying the eye in attempting to cure lachrymal disease.

Treatment.—In the early stages of catarrh of the lachrymal mucous membrane, the disease is easily managed. Astringent or caustic lotions are often applied to the eyelids. They allay the accompanying conjunctival inflammation. The very small quantum which enters the puncta can hardly be said to have a curative power over the lachrymal mucous membrane. To pro-

duce an effect upon this surface, an astringent wash must be injected through the canaliculi by Anel's syringe. The passages may first be washed out with warm water, and then the astringent introduced. In more chronic catarrh, and where the spongy mucous membrane partly closes the nasal duct, a weak solution of nitrate of silver may be injected, using it from five to ten grains to the ounce. In injecting nitrate of silver solutions through a canaliculus, care must be taken to prevent regurgitation through the other canaliculus, by squeezing it with forceps whose blades are not toothed or too rough. If the fluid can be forced into the nose, and its subsequent injection becomes more and more easy, this proceeding may cure the disease. If, however, there be great difficulty in forcing the fluid into the nose, and if there be no improvement, after a few trials, the presumption is, that stricture of the nasal duct has begun. It always requires considerable force to use the fine-pointed syringe of Anel, and the normal resistence it offers must not be mistaken for resistence in the lachrymal passages.

Upon this presumption of nasal stricture, Mr. Bowman's method of treatment must be adopted: the inferior punctum and canaliculus should be laid open, and a probe inserted into the masal duct. It is best to begin with No. 3 or 4, as they are less liable to wound the lining membrane. The largest size should be passed that will enter easily. The probe may, the first time, be left *in situ* for twenty minutes; then the sac and duct may be syringed out. It will often be found, in recent cases, that the probe will need but a few introductions, at intervals of two or three days; and the astringent or caustic injection will speedily remove the lingering catarrh. On the other hand, in more protracted cases, the stricture will be found less yielding; it gives a grating sensation as the probe goes through it. The amount of muco-purulent secretion may be small; probe No. 3 or 4 may enter, but No. 5 not without violence. Such a case requires persevering dilitation. Advance from a smaller to a larger size must sometimes be made gradually, at other times rapidly. The probe may be introduced at intervals of one to three days, according to the sensibility of the parts, and may be left in place half an hour at a time. Even where the largest size has been reached, it should be passed a number of times, at intervals of a week, to prevent contraction of the stricture. There is much the same propensity to contraction in strictures of this canal as in strictures of the urethra. In fact, the philosophy of treatment in the two cases is identical. The time necessary to effect a cure is, of course, variable; it will be from one to six months.

The attempt is to restore the tissues to their healthy condition; and, to do it, the mechanical obstacle (the stricture,) must be overcome, and permanently, while the chronic inflammation of the mucous membrane is to be set aside. The mechanical treatment has a great influence in abating the chronic catarrh, because the irritating morbid secretions are thus set free. Often no other proceedings are necessary than passing the probe. Injections are needed only where there is profuse catharrhal secretion distending the lachrymal sac and irritating the conjunctiva.

A few words as to the manner of introducing probes:—Each end of the instrument has a different size; and the most convenient kind has a shield soldered to the middle, upon which the numbers are stamped, and which enables the probe to be handled more readily. The sizes were, originally, from one to six. I have found that larger probes can be passed, and have added Nos. 7 and 8. These large sizes require the canaliculus to be divided quite up to the lachrymal sac.

In using the probe, it must be curved to correspond with the configuration of the face. Simply bending it for half an inch from its tip is not enough, neither is the same curve adapted to all cases. The height of the nose and the prominence of the brow will greatly alter the depth and course of the lachrymal duct. The probe then must have a large curve, that is, it should be an arc of a circle, whose radius will be shorter or longer as the case requires. The larger sizes, from 5 to 8, must be of pure silver; the smaller sizes should be alloyed to give them stiffness. It is better to stand behind the patient, with his head resting against your person; tell him to look upwards; draw the lower lid downwards and outwards with one hand, and with the other use the probe. The concave side of the probe must be kept forwards, the point carried horizontally along the divided canaliculus until, entering the lachrymal sac, it strikes against the opposite bony wall. It is sometimes difficult to get thus far,—the mucous membrane of the canaliculus may be folded over the probe, or the passage may be too narrow. When this is the case, the skin of the lid will be wrinkled and pushed inwards as force is applied to the instrument. To avoid folds of the mucous membrane, it is well to make the point of the probe press forward as it is pushed along. If the passage be too narrow, it must be cut with the knife, or a smaller size taken. If the point strike the inner wall of the lachrymal sac, (and this will be recognized by its solid resistence,) it should be held fixed while the other end is brought to the vertical position.

When this change is made, and not until then, should the probe be pushed downwards. If it has been properly curved, it will not press against the brow in going down, nor meet any resistance, except from the stricture. But, if the probe be too straight, it presses painfully against the eyebrow, the point scrapes the mucous membrane of the nasal duct, and there will be great risk of making a false passage. In pushing the probe downwards, its point should be directed a little outwards towards the ala nasi. In following these rules strictly, as to direction and shape of the probe, considerable force may be safely employed, but no violent efforts should be made. If one probe will not pass readily, try a smaller size. When the probe is fully down, the shield comes opposite the eyebrow, and the probe points to the ala nasi. If the upper end pitches forwards, or the direction deviates from the above, a false passage has been made. This begins usually at the top of the nasal duct, and is made outside of the superior maxillary bone, under the tissues of the cheek. Fortunately, no serious harm is thus inflicted, if the mistake be not persisted in: the wound will heal in a few days, and the attempt may be repeated. Ecchymosis of the lid or cheek often betrays this error.

The intermittent dilatation by probes must be persevered in for weeks and months,—the intervals becoming longer as the tendency to relapse diminishes. Very satisfactory results are thus obtained. Patients sometimes get tired of repeated probing, and, when they have been on the point of giving up treatment, in disgust, I have resorted to another method of accomplishing dilatation of the stricture. I have taken a piece of lead-wire of the same size as the probe which can be passed, rounded one end to make it smooth, and pushed this into the nasal duct; the upper end is bent at an acute angle, and hangs over the edge of the lower lid. This I have left *in situ* for one day or three days, and, in one case, for three weeks, without producing irritation of the eye. The stricture was kept dilated, and the epiphora ceased. I should not employ this method except on patients whom you can see at any time; but a few trials of it have given me a favorable impression of its value in shortening the duration of treatment and in making the dilatation more permanent.

This process of dilatation sometimes needs to be continued with astringent applications to the mucous lining of the sac, by a fine syringe, or by collyria dropped into the eye. More frequently such treatment is needless; the catarrhal inflammation abates, *pari passu*, as the obstruction yields.

Phlegmonous inflammation and abscess may take place either with or without stricture of the duct. When first it threatens, it may be aborted by applying two to four leeches over the sac, and by the assidious use of iced compresses. If suppuration cannot be avoided, employ warm fomentations, and make an incision into the sac as early as possible. I would urge the importance of an early opening; if no pus appears, the tension of the tissues is relieved, and the bleeding is serviceable: when suppuration shall take place, it will not undermine the skin, as it is prone to do when left to its own course. Be not stinted in the size of your incision, and aim to penetrate the sac. The best mode of doing the operation is, to stand behind the patient, who will be on his back or sit in a low chair, and use a straight bistoury. Put the point as nearly over the middle of the tendo oculi as the swelling will enable you to judge, holding the handle perpendicular to the plane of the face and turned a little outwards; thurst the point quickly backwards, so as to strike the lachrymal bone, and immediately carry it downwards and outwards. If the patient's head suddenly starts up as the knife enters, his movement makes the cut larger, and aids your purpose.

An abscess which opens by ulceration, or which has been too sparingly incised, is apt to fill up again, and require repeated incision. Sometimes it will linger along in this way for two or three months. It is then apt to degenerate into fistula lachrymalis. Fistula is not so likely to occur when an abscess is opened early and sufficiently. The cutaneous orifice of a fistula may be concealed by a thin layer of cuticle, or it may be pouting with fungous granulations. It may, in time, cicatrize, and contract to a capillary opening. The course of the fistula is sometimes crooked, but there is, generally, no difficulty in passing a probe through it into the lachrymal sac. If the fistula be recent, it may be closed by cauterizing it once, in two or three days, with a pointed crayon of nitrate of silver. Such are made by Squibb. But, if the fistula be old, and, in every doubtful case, there must first be an exploration of the nasal duct and lachrymal sac, to decide upon their condition. If their calibre and lining membrane are or may be made normal, then try to close the fistula. If there be a stricture, dilate it with probes *per vias naturales*, slitting up the canaliculus: do not attempt to dilate stricture through the fistula. But if the nasal duct be the seat of an unconquerable stricture, or be closed by ossific growth; if the lachrymal sac be enormously dilated, and its mucous lining have become a mere pyogenic membrane; if there

be caries of the adjacent bones; if fistula have lasted a long time; or if a patient cannot spare the time which may be needful to restore the passages to a healthy state,—another proceeding must be adopted. This is the obliteration of the lachrymal sac and upper portion of the nasal duct. Tavignot adopts the obliteration of the canaliculi alone, but I do not deem this sufficient, certainly not in bad cases. This proceeding was in use a hundred years ago,—it is described by St. Yves. In late years it has been revived by Desmarres, and it is now very generally adopted. But, you will ask me: if you totally occlude the sac and duct, what will become of the tears? Will not epiphora be more distressing than ever? Bear in mind that you have an incurable disease of the passages; they are in a state of perpetual inflammation; they keep up a chronic conjunctivitis, and reflect irritation upon the lachrymal gland. Hence, there is a constant hypersecretion of tears, as well as obstruction to their natural escape.

If you destroy the inflamed lachrymal mucous membrane, and shut up the cavity which is the seat of disease, you remove the cause which provokes chronic conjunctivitis and excessive lachrymal secretion. Soon the conjunctiva recovers a healthy state, and tears cease to flow more than to meet the physiological demand. The fluid for moistening the eye is, ordinarily, supplied by the conjunctiva, and a slight excess is evaporated. When in the house, or where nothing irritates the eye, a patient is entirely comfortable; but when exposed to wind or dust, and tears flow more freely, they must stand in the conjunctival sac, or overflow the cheek. In the latter case, a patient with obliterated lachrymal sac suffers inconvenience. But this is admitting what is true of a multitude of surgical operations: they do not restore the perfect performance of function, they only mitigate an evil. Resected joints are not so good as healthy joints, but they are far better than anchylosis.

But you will ask: Why not insert a style? Simply, because a style answers no better purpose than does occlusion of the sac. It is a foreign body, an unsightly object, and an annoying thing to wear.

Dupuytren's tubes are far worse than styles: they become impacted in the nasal duct, and, by causing absorption of adjacent bony walls, they sometimes travel far out of their intended place, and often provoke serious suppuration. They are utterly out of use. A similar but less amount of mischief attaches to the style as being a foreign body, while obliteration of the sac and duct accomplishes, at least, all that the style can.

Another objection may be made in the supposed deformity which such an operation must cause. A scar is left at the inner angle of the eye, which is sometimes sunken, but is always linear, and is never conspicuous. I have done the operation upon the lachrymal sacs of a young lady of seventeen years, without at all maring the beauty of her fair face.

The mucous membrane of the lachrymal passages may be destroyed in a variety of ways. The most elegant method is by the galvano-caustic,—but the apparatus is expensive, and very liable to get out of order. The actual cautery is used more frequently than any other proceeding; then a variety of potential cauteries are used, such as nitric acid, caustic potash, butter of antimony, chloride of zinc, and nitrate of silver. In the Infirmary, we resort usually to the hot iron. The cauteries are of various shapes, bulbous or pointed, and one is bent at an obtuse angle within two inches of the point, to enable it to be thurst down into the nasal duct without burning the skin of the brow. It also has a bulb for retaining its heat. The irons are heated most conveniently in a dentist's furnace-lamp. They should not have more than a very dull red heat; it is better that they should not be at all red, than be too hot.

It is always necessary to use an anæsthetic; and, for this operation, I prefer sulphuric ether. The sac is laid freely open from its uppermost part across the tendon of the orbicularis, down a little distance upon the cheek. The incision must be at least an inch long, and its lower end curve outwards a little. When the sac is fully exposed, wait for the bleeding to stop,—ice may be applied to save time. The operation is much delayed by the copious bleeding which always occurs from capillary vessels; I have attempted to check it by persulphate of iron, but was more embarrassed by the coagula than if I had not used it. It is better to trust to ice, and pressure, and spontaneous coagulation. When the wound is dry, have it stretched open by retractors. These may be sharp hooks to catch the skin, or leaden spatulæ. It is well to use one leaden spatula which will at the same time cover the eyeball from harm.

The cauteries are applied carefully to the whole of the sac, and to as much of the nasal duct as can be reached, until the mucous membrane is well blackened. It is also well to introduce a fine cautery into the canaliculi, but is not always necessary.

Sometimes the reaction from the operation is smart. I have seen acute conjunctivitis and chemosis follow; there will always be considerable swelling of the lids. But, generally, the inflamma-

tory reaction is moderate. Compresses dipped in iced water are the proper dressing.

The cauterization may not have been thorough, and a small fistulous opening will, after three or four weeks, remain. Unless the cavity is totally obliterated, the operation will be fruitless. If there should be a remaining pocket, a bit of solid nitrate of silver may be pushed into it and left there. This will usually suffice.

The heated iron produces less reaction than nitric acid or caustic potash; it can be more carefully managed, and it is not so liable to cause superficial necrosis of the bony walls. But, in private practice, the actual cautery would be looked upon with horror, and you may have to employ nitric acid or potassa fusa.

Even solid nitrate of silver is said to be adequate: a piece is put into the sac and left to dissolve. After a week or two another piece is thrust in, and this is repeated until occlusion is obtained.

You need not be alarmed if the bony walls should be denuded, and superficial necrosis occur. The healing will be protracted, but I have never seen serious ill effects result.

The time required for a cure by the actual cautery is about four weeks. I can only repeat, that the operation affords great relief, that it has, in almost all cases, been gratifying to myself, and that, while some objections to it are unfounded, those which do lie against it are such as may be urged against many well-established surgical operations.

One remark remains to be added. In young children, you are often unable to employ operative treatment,—probes and occlusion of the sac are out of the question. You may effect much by giving them cod-liver oil, iodide of potassium, by using astringent collyria, and by invigorating the general health in every practicable way.

Adults are sometimes averse to operative interference. You can alleviate the annoyance of their complaint by showing them how to empty the distended sac and avoid irritating the eye. Teach them to press with their fingers or handkerchief upon the lachrymal sac, and absorb the fluid which regurgitates by simple pressure, without rubbing the eyelids. Friction of the eyelids is very irritating, while gentle pressure empties the sac, dries the eye, and gives relief. It is important to keep the sac empty,—accumulations of muco-pus aggravates the inflammation and irritates the conjunctiva.—*American Medical Times.*

LECTURES ON NEW REMEDIES AND THEIR THERAPEUTICAL APPLICATIONS.

DELIVERED AT THE
NEW YORK MEDICAL COLLEGE AND CHARITY HOSPITAL.
By SAMUEL R. PERCY, M.D. Professor of Materia Medica & Therapeutics.

ON THE USE OF VERATRUM VIRIDE AS A MEANS OF ARRIVING AT A CORRECT DIAGNOSIS IN DISEASES OF THE HEART AND LUNGS.

Reprinted from the "American Medical Times."

GENTLEMEN:—I purpose to-day to relate to you the symptoms I found present in a case of disease of the heart. I will then give you the treatment I adopted for their amelioration, and, as far as time will permit, explain to you the action of the remedy used, and how, by this action, a clear and correct diagnosis could be determined, when, previous to this administration of the remedy, it was almost impossible to arrive at an accurate diagnosis.

James Cunningham, æt. 40, a day-laborer. About four years ago he had acute rheumatism: since then he has complained of impeded and difficult respiration, accompanied with more or less palpitation. These symptoms have increased in severity, until at present he is hardly able to move. The first inspection of this man's face gives one a thrill of pain, for intense suffering is so plainly imprinted upon it: the eyes have a wild and anxious look, the mouth is partly opened, the nostrils are dilated; and these and other marked alterations from the aspect of the features while at rest, are all produced by one necessity, that of better respiration. In a word, we have dyspnœa. If we stop to count the breathing, we find he has from forty-seven to fifty respirations in a minute, and we see that this dyspnœa differs greatly in character from the dyspnœa of asthma or pneumonia; it is rather of a gasping, strangling character. The throat and chest are bare, the arms are rested and poised so as to give the muscles of the chest every opportunity to perform their functions. As you watch him, you see that he makes no effort at motion, or rather that he tries to avoid making the slightest effort, for fear it will increase his dyspnœa; that he even avoids speaking, and looks to others to answer questions for him. Sick as this man looks and feels, he is not in bed, but is seated in a large arm-chair, with his feet upon a pillow, and we learn, upon inquiry, that he has not lain down, or hardly been out of that chair for a week, and that during that time he has scarcely slept for a minute; that although intensely

sleepy, the minute his eyes close in sleep he awakes with a sudden start, and a gasp as if suffocation were imminent. As we sit quietly watching him for a few minutes, we see a drowsiness gradually creeping over him, we see his eyelids close, and for a moment or two we can fancy his breathing easier, and he looks as though he might sleep, but in an instant he starts and gasps for breath, and again that look of the horror of suffocation overspreads his face.

We see, then, that in addition to dyspnœa, or difficulty of breathing, he has *orthopnœa*, an inability to assume a recumbent posture during sleep without producing a struggle for breath.

Let us now attend to the state of the pulse. The moment the finger is applied to his radial artery, we find the pulse is a most peculiar one. Instead of the steady beat we find in health, we here have what is usually called a jerking or leaping pulse. It feels as though the impetus given had not been completed, and as two or three fingers are spread over any of the larger arteries, there is a serpentine, wriggling sensation conveyed to them, and this sensation, which may be felt, may be plainly seen, if any of the arteries, either large or small, be closely watched, and it will then be noticed that the arteries have assumed a very tortuous appearance. The bowels are costive, the urine is secreted in small quantities, and it is of a dark red color, containing large quantities of purpurate of ammonia. There is a dry, teasing, irritative cough. The feet and legs are much swollen, and we learn that the swelling has much increased within the last few days, and that it has progressed upwards. What do all these symptoms tell us? To a junior student they explain little of the cause of the disease, but to one of experience every symptom is full of information! The peculiar, serpentine, wriggling pulse, that I have described, is always indicative of one peculiar disease of the heart, and wherever you find this pulse you may safely pronounce that there is regurgitation,—aortic regurgitation. How shall we prove this to be the fact in this individual case? You will say, that ascultation and percussion will plainly settle this point! As with difficulty we get the man into such a position as to listen to the heart, we are struck with the tumultuous amalgamation of sounds and murmurs, and with the closest intensity and nicest perception we are utterly unable to state positively what we do hear. With a rapid respiration of fifty in the minute, and a pulsation too fast to count, how is it possible to arrive at anything like a correct diagnosis? We plainly hear an unnatural murmur, but it is

utterly impossible to define its character, or tell with which sound of the heart it occurs.

It is, precisely, in this state of disease that the medicine that I have mentioned, veratrum viride, is of such inestimable value to us, not only in ameliorating the symptoms, but in enabling us to arrive at a correct diagnosis. As this man is in a critical condition, and as the medicine we propose giving him is a powerful sedative, it will be necessary to give it with caution, and watch the state of the pulse from hour to hour. I will commence with a dose of three minims of the concentrated tincture, the formula for which I will give you hereafter. Upon returning in an hour, although the pulse cannot be counted, it is evidently more regular than before, the respirations are now forty-two in the minute, and the patient thinks he feels a little easier. We now give him two minims every hour, for three successive hours, when we see him again. The pulse can now be counted, 132 beats in the minute, but it requires great attention, or you easily loss the count; the respiration is certainly much easier, and is thirty-seven in the minute. The man says, he is already easier than he has been for a week, but he dares not trust himself to sleep for fear of the orthopnœal paroxysm. Leaving him now in the care of an intelligent friend, we shall not see him again till morning. As we see him at 10 A.M., eighteen hours since the administration of the first dose of veratrum viride, we find a very marked change. We learn that he took two minims every hour until midnight; he then felt a little nausea; and he has taken two minims every two hours since midnight. The pulse has gradually decreased in frequency, being now about ninety in the minute, and the respirations thirty-one. Since midnight he has slept at intervals of fifteen to twenty minutes at a time, and wakes up with a struggle. He has also stood on his feet several times to have his cushion shaken up; the urine has been passed in much larger quantity. I now direct that four minims of the tincture, combined with one-eighth of a grain of sulphate of morphia, be given him at 10, 11, and 12 o'clock, and I will see him again before 1 o'clock. You will find, as you use veratrum viride more frequently, that you will occasionally need to give it in full doses without inducing nausea, and, with this object in view, you will combine it with morphia. The morphia again has another adjuvant action: it lessens the number of respirations, when given in combination with veratrum, more readily than either remedy will do alone. And now, at 1 o'clock, in what state do we find our patient? He still sits erect in the chair, but his head has

fallen back, and he is sound asleep; the respirations are only twenty-two in the minute, and the irregular pulse, taking an average of three minutes, beats only fifty-five in the minute. Let us now gently awaken him, and examine the state of his heart and lungs by auscultation. We now find a very marked difference from the tumultuous sounds heard at our last examination, for as then all was indistinct and confused, now every sound and murmur can be distinctly appreciated with the greatest ease. There is no difficulty for the youngest student to now readily study and comprehend every normal and abnormal sound. We find, upon percussion, that there is marked hypertrophy of the heart, and that this hypertrophy is general, and has caused a downward subsidance of the organ, and, as is common with dyspnœa from other causes, there is a descent and flattening of the diaphragm. We find, upon further examination, that the severe dyspnœa has caused lung inflation or distention, and that the border of the lung overlaps the heart, which is another cause of downward subsidence. We now plainly hear a distinct murmur and regurgitation following the incomplete closure of the aortic valves, and as the movements of the heart, and the respirations also, are now slow, this imperfect closure of the valves, with the sudden and jerky flow of blood into a partially collapsed aorta, and subsequent regurgitation of blood into the ventricle, with the damming back of the whole current of the circulation, are plainly audible. A murmur is distinctly heard in the carotids, and the serpentine, wriggling movement, of which I have before spoken, can be most easily seen and felt in the arteries that approach the surface. I must not be too minute in my description of pathological conditions, but confine myself to my proper sphere,—the action of medicines. But I must give a brief description of the result of the treatment in this case. You will remember that, previous to the administration of the veratrum, we could hear but little by listening to the lungs. Now, we plainly distinguish that the dyspnœa which exists is not dependent upon want of air supplied to the lungs, but on want of proper circulation within the pulmonary vessels. We spoke of an irritating dry cough. The cough still continues, but not so incessantly as when we first noticed it; and it is not now dry, but there is quite free expectoration of viscid mucus; there is no pus with it, and the complete absence of pus alone is a strong symptom to assure us that no inflammatory action of the lungs was the cause of the dyspnœa, but mere passive congestion, caused by sluggishness of the circulating fluid. The kidneys now have secreted very large quantities of fluid, and it

is of a brighter yellow color. This is not because we have given diuretics, but owing to the relief we have given to the circulation, for previously the slow and imperfect passage of the blood through the kidneys prevented the draining off of the proper quantity of water, partly, because of the non-renewal of fresh blood to the kidneys in sufficient quantity to part with its water, and partly because the heart and lungs had not sufficiently metamorphosed or vitalized the blood to present it to the kidneys in quality to be eliminated.

We find our patient much relieved in all his symptoms. The dyspnœa is much relieved; the orthopnœa, for the present, has left him; the cough is less frequent, and, if you watch him, you see that it now scarcely troubles him if he does cough; the urine is free in quantity; he can move, and complains of feeling hungry; and all this relief has been brought about in twenty-one hours by the administration of thirty-seven minims of my concentrated tincture of veratrum viride! Now, how has this small quantity of medicine produced this amelioration? We have frequently before explained to you that veratrum viride is the best arterial sedative that we possess; that when judiciously administered, it regulates the action of the heart, and brings it to its normal standard. It lessens the irritability of the whole vascular system, and causes the blood to flow more readily and quietly. It does this not only by its action on the heart, but, as we have demonstrated by its action on the bloodvessels and upon the blood itself. Its sedative action upon the bloodvessels I have demonstrated in many instances, and I have witnessed a marked change in the character of the blood during the action of this remedy. These peculiar changes in the action of the heart and bloodvessels, and the alteration in the character of the blood, by veratrum viride, I must leave till another lecture. The action we notice in the case I have related is, a gradual subsidence in the rapidity of the circulation, and, consequently, a great relief from the oppressive dyspnœa. As the circulation becomes more quiet, we plainly notice a more thorough contraction of the aortic valves, and, although we have not in any way cured the organic lesion, we have, to a very marked extent, relieved the functional disturbance. And not only have we relieved our patient from intense suffering, but (whereas, when we first saw him it was utterly impossible, by ascultation or percussion, to form any diagnosis as to the extent or character of his disease,) we can now, while he is under the influence of our remedy, form a clear, accurate, and correct diagnosis, without difficulty and without danger.

I have, since 1856, been in the habit of preparing every patient, whose heart and lungs I have wished to examine, with small and proper doses of veratrum viride, and by this means I have been enabled to arrive at a clear and certain diagnosis of cases of incipient phthisis, pleuritis, pneumonia, diseases of the heart, etc., that I could not clearly diagnose without the previous preparation of the patient with this remedy, owing to functional disturbances or other exciting causes. There are many persons who are examined for these diseases, where it is almost impossible to arrive at any correct diagnosis in the early stages of disease, at which time *only* treatment can be expected to be of much avail, owing to even slight functional disturbances, which completely mask or render obscure the signs that without the disturbing causes would be readily recognized. Now, veratrum viride quiets these functional disturbances, lessens the rapidity of the circulation, tranquillizes the respiration, and thus so moderates these functions that the mind can readilly define and arrange the sounds that are communicated to the ear. I give you this new means of diagnosis as the result of my own investigations. I am not aware that it has ever been practiced, except by those to whom I have communicated it. I need not impress upon you its vast importance, for, by means of this practice, you may always know what you are treating, and you will find that that is no slight gain in your ability to inform your patient of what he may expect from your treatment. This new means of diagnosis will be of inestimable value to the Life Insurance Companies in all cases of doubtful diseases of the chest.

But let me, in a few words, finish what I have to say on the treatment of the patient before us, and I must leave further discussion of the interesting subject matter before us to another lecture.

As soon as our patient had entirely overcome all feelings of nausea, half a grain of elaterium was administered to him. It produced a large watery evacuation, and greatly relieved the œdematous condition of the legs. By small doses of veratrum viride, cautiously administered whenever dyspnœa became troublesome, by the admistration of half a grain of elaterium every third day, and by the use of the vegetable tonics, and a nutritious, but carefully watched diet, our patient is out and about his ordinary occupation, but he has to be very careful, or the orthopnœal struggles prevent him from sleeping at night. He will, probably, die suddenly. I have merely related this case as a means of interesting you in the new method of diagnosis I have proposed to you. It was more easy for me to bring it before you in this way.

Of the concentrated tincture of which I have spoken, I have found that which is usually sold in the drug stores under the name of Norwood's Tincture, of very uncertain strength, scarcely ever being alike in two different stores; and I think a great deal of the want of uniformity complained of with this remedy, is owing to the imperfect manner in which the tincture I have spoken of is made. From the many experiments I have performed, I have found that the medicinal principle of the root is contained in the resin. To obviate all difficulties of the uncertainty of strength, I have prepared the tincture I have been in the habit of using, after the following formula, and have always found it uniform in strength:—

CONCENTRATED TINCTURE OF VERATRUM VIRIDE.

Any quantity of well-selected root is coarsely powdered, and treated with alcohol 86°, by percolation, the alcohol is distilled off, and the residuum evaporated to an extract over a water-bath until it is nearly dry, or until it ceases to become lighter upon being weighed at intervals of an hour or two. To make the tincture, one part of this extract is dissolved in ten parts of alcohol at 86°, and filtered.

Any good pharmaceutist can prepare this tincture, but if any of you wish to use it immediately, either the tincture or the extract can be obtained from Mr. Faber, Sixth Avenue, corner of Thirty-eighth Street.

This tincture is nearly double the strength of that called Norwood's, and the medium dose is about two minims. I also use the pure resinoid, and a tincture prepared from it, of which I will speak at another time.

Pus in the Blood; no Metastatic Abscesses.—Professor Langier has communicated to the *Gazette des Hopitaux* the case of a man, aged thirty-seven, who begged for amputation of the thigh on account of excruciating pain connected with white swelling of the knee. The patient died a week after the operation, having had several fits of shivering. M. Langier concluded, from the rapidity of the phenomena, that no metastatic abscesses would be found, but suspected that pus-globules might be discovered in the blood. M. Chatin examined three drachms of blood taken from the right side of the heart, and found pus-globules by the microscope in one of the three drachms. Ammonia gave a gelatinous precipitate in the second portion; and ammonia was evolved by the last drachm when left to decompose. From the first two results, M. Langier concludes that the blood contained pus.—*London Lancet.*

Book Notices.

A Practical Handbook of Medical Chemistry. By John E. Bowman, F.C.S., formerly Professor of Practical Chemistry in King's College, London. Edited by Charles L. Bloxam, Professor of Practical Chemistry in King's College, London. Third American from the Fourth and Revised London Edition, with Illustrations. Philadelphia: Blanchard & Lea. 1863.

The Medical Student's Vade-Mecum. A compendium of Anatomy, Physiology, Chemistry, Poisons, Materia Medica, Pharmacy, Surgery, Obstetrics, Practical Medicine, Diseases of the Skin, &c., &c. By George Mendenhall, M.D., Professor of Obstetrics and Diseases of Women and Children in the Medical College of Ohio, Member of the American Medical Association, &c., &c. Seventh Edition, Revised and Enlarged, with 224 Illustrations. Philadelphia: Lindsay & Blakiston. 1863.

A Practical Treatise on Fractures and Dislocations. By Frank Hastings Hamilton, A.B., A.M., M.D.; Lieutenant-Colonel; Medical Inspector of U. S. A.; Professor of Military Surgery and Hygiene, and of Fractures and Dislocations, in Bellevue Hospital Medical College; one of the Surgeons to the Bellevue Hospital, New York; Professor of Military Surgery, &c., in the Long Island College Hospital, Brooklyn; author of a Treatise on Military Surgery. Second Edition, Revised and Improved. Illustrated with 285 Woodcuts. Philadelphia: Blanchard & Lea. 1863.

The Action of Medicines in the System: Being the Prize Essay to which the Medical Society of London awarded the Fothergillian Gold Medal for 1852. By Frederick William Headland, M.D., B.A., F.L.S., Licentiate of the Royal College of Physicians, &c., &c. Fourth American Edition. Philadelphia: Lindsay & Blakiston. 1863.

A Theoretical and Practical Treatise on Midwifery, including the Diseases of Pregnancy and Parturition, and the Attentions required by the Child from Birth to the Period of Weaning. By P. Cazeaux, Member of the Imperial Academy of Medicine, Adjunct Professor in the Faculty of Medicine of Paris, Chevalier of the Legion of Honor, &c., &c., &c., &c. Adopted by the Superior Council of Public Instruction, and placed, by ministerial decision, in the rank of the Classical Works designed for the use of Midwife Students in the Maternity Hospital of Paris. Third American, translated from the Sixth French Edition. By Wm. R. Bullock, M.D.; with 140 Illustrations. Philadelphia: Lindsay & Blakiston. 1863.

All the foregoing works are excellent treatises on the several branches set forth on their title pages, and by authors of de-

servedly high reputation. They are new editions of works which have been long enough before the profession to be well known and duly appreciated; hence, no extended notice of their contents is required. The publishers have also executed their part of the task well: the paper, type, illustrations, and binding being all of excellent quality. They may be found for sale at the Book Store of W. B. Keen & Co., Lake Street, Chicago.

Editorial.

Mercy Hospital.—It is well known to most of our readers, and especially to those who have visited or attended the medical colleges in this city, that the Hospital of the Sisters of Mercy has afforded the chief resources for direct clinical or bed side instruction ever since its commencement in the autumn of 1850. It is equally well known, that up to the present time its prosperity and usefulness have been greatly retarded by the want of a suitable hospital building. Hence, we could make no more gratifying announcement, both to the friends of the sick and of medical education, than the fact, that during the next thirty days the hospital will be transferred to entirely new quarters. An ample plot of ground, beautifully improved, and occupied by a well-constructed building, on the corner of Calumet Avenue and Rio Grande Street, has been secured and fitted up as a permanent location for the hospital. The building is constructed of brick, 40 by 80 feet, and four storys high. It contains six public wards for ordinary medical and surgical patients, both male and female; six smaller rooms, admirably adapted for the accommodation of those patients whose circumstances render them desirous of better and more quiet rooms than can be had in a general ward; and a ward especially for lying-in women. We shall thus have a general hospital, worthy of the name, and adequate to the wants of the city. It will continue, as heretofore, under the excellent management of the Sisters of Mercy. The medical wards will continue under the

charge of Prof. N. S. Davis; the surgical, under the charge of Prof. E. Andrews; and the lying-in department, under the care of Prof. W. H. Byford. Being located only a few blocks distant from the new building for the Medical Department of Lind University, it will continue as fully accessible for clinical instruction as heretofore.

Medical Department of Lind University.—The friends of this Institution will be gratified to learn that its next Annual Course of instruction will be given in an entirely new and permanent College edifice. The latter is now in process of erection, and will be completed before the end of September next. It is located in the South Division of the City, near the corner of State Street and Ringgold Place. It is being built of brick, three storys above the basement, and will contain a Library and Dispensary Room, Laboratory, Museum, Dissecting Room, College Hall or Lower Lecture Room, and Amphitheatre. Being constructed especially for a Medical College building, it will contain all the conveniences and comforts that are desirable in such institutions. The location is directly between the Mercy Hospital and the City Hospital building, and so near that students will have easy access to both; thus enabling the Faculty to retain the most ample clinical advantages, as a part of their regular course of instruction. The present Summer Course of instruction, which is now nearly completed, has been a very pleasant and profitable one; and the institution, in all its relations, is steadily increasing in its prosperity.

—

Since the above was in type, we have received the following official announcement from the Faculty of the College, which we insert with pleasure:—

TO THE FRIENDS AND PATRONS OF THE CHICAGO MEDICAL COLLEGE,—MEDICAL DEPARTMENT OF LIND UNIVERSITY:

Since the issue of our Annual Announcement at the close of the last Lecture Term, some changes and improvements have been made, which we are sure will be gratifying to all the friends of a more systematic and extended system of medical education.

The Board of Trustees of the Lind University having determined to change the name of that institution, to that of "Lake Forest University," it became necessary to choose some other name for the Medical Department, to prevent frequent mistakes in reference to its locality. It had also become necessary for the Faculty of the Medical Department to become organized as a corporate body, to enable it to receive and hold property independent of the Board of Trustees. For these reasons, it has been deemed advisable to adopt, as a separate and permanent name, the *Chicago Medical College;* and hence, by this title the Institution will be known and designated hereafter.

An improvement of much greater importance to the friends of the school, consists in the acquisition of new and commodious college building and grounds, located in a pleasant and very accessible part of the city. The building is now advancing rapidly towards completion, and will be fully ready for occupancy at the commencement of the next regular Annual Lecture Term. In planing the building, no unnecessary expenditures were incurred for mere external architectural show; but such internal arrangements were made as to secure every needed accommodation and convenience. Its location is such as to secure a continuance also of the most ample means for hospital clinical instruction, being only a few blocks distant from the new Mercy Hospital, on the one side; and still nearer to the City Hospital building, on the other.

In thus announcing the important improvements being made in our college accommodations, it is deemed advisable to add a brief statement of the principles on which the Institution is founded, and the objects its Faculty aim to accomplish, as follows :—

First, That the Medical College should embrace such a number of Professorships, and such length of Lecture term, as will enable the Faculty to give a fair review of all the important branches of medical science during each term.

Second, That the several branches should be so grouped as to enable the student in his several courses to pass from the

more fundamental to the more practical branches, as in all other departments of education.

Third, That the instruction in all the departments or branches should be demonstrative, as far as possible, and not merely theoretical.

In accordance with these principles, the founders of the Chicago Medical College adopted a curriculum of instruction embracing thirteen professorships, namely, Descriptive Anatomy; Physiology and Histology; Inorganic Chemistry; Materia Medica and Therapeutics; General Pathology and Public Hygiene; Surgical Anatomy and Operations of Surgery; Organic Chemistry and Toxicology; Medical Jurisprudence; Obstetrics and Diseases of Women and Children; Principles and Practice of Surgery and Military Surgery; Principles and Practice of Medicine; Clinical Surgery; and Clinical Medicine.

They divided these into two groups, called the junior and senior departments or courses. The five first named branches constitute the junior course; and the remaining branches the senior course.

The full Collegiate year embraces nine months, namely, from the first of October to the first of July. Five months of this period, namely, October, November, December, January, and February, constitute the regular Annual Lecture Term; and the remaining four months constitutes a summer reading and Clinical Term. The regular Lecture Season, or Winter Term, embraces full courses of instruction on all the branches named in the curriculum of both junior and senior departments. And the hours of lecturing are so arranged that any student can attend, if he chooses, the lectures on all the branches in both departments throughout the term.

But all first course students are *required* to attend, faithfully, the branches embraced in the junior course; and are required to undergo a careful examination in those branches at the close of the term. Second course students are required to attend all the branches in the senior course; while those who attend a third course, can select such branches from both departments as they may choose.

The clinical course embraces a regular medical or surgical clinic in the hospital and dispensary, one hour each day, throughout the Collegiate year.

The Summer Term of four months embraces one familiar lecture and one clinic each day.

The system of medical college instruction, thus arranged, has a comprehensiveness equal to the present extended range of medical sciences; a systematic order of progress, favorable alike to thorough acquisition of knowledge and desirable mental discipline; while the daily hospital clinics render the courses on the practical branches as demonstrative as those on the more elementary.

Both for the purpose of interesting the profession of the State more directly in the cause of medical education, and for avoiding all cavil in reference to the character of the final examination of candidates for graduation, the Faculty have requested the Illinois State Medical Society to appoint annually a Board of three Censors to attend on, and participate in, the examinations at the close of each Annual Course of instruction.

The system thus devised has now been in practical operation four years; and its success has been more than equal to the expectations of the Faculty.

Hence we again invite the attention of the profession to it, in connection with the new College Building, with a full conviction that it will meet with universal favor. The following constitute the present active members of the Faculty:—

J. S. Jewell, M.D., Professor of Descriptive Anatomy.

H. A. Johnson, M.D., Professor of Physiology and Histology.

J. H. Hollister, M.D., Professor of Materia Medica and Therapeutics.

Henry Wing, M.D., Professor of General Pathology and Public Hygiene.

F. Mahla, Ph. D., Professor of Inorganic Chemistry.

Edmund Andrews, M.D., Professor of Principles and Practice of Surgery, and of Military Surgery.

Ralph N. Isham, M.D., Professor of Surgical Anatomy and Operations of Surgery.

W. H. BYFORD, M.D., Professor of Obstetrics and Diseases of Women and Children.

N. S. DAVIS, M.D., Professor of Principles and Practice of Medicine, and of Clinical Medicine.

F. MAHLA, Ph. D., Professor of Organic Chemistry and Toxicology.

H. G. SPAFFORD, Professor of Medical Jurisprudence.

J. S. JEWELL, M.D., Demonstrator of Anatomy.

The regular Lecture Term commences on the second Monday in October, and continues until the first Tuesday in March, following.

The Summer Term commences on the second Tuesday in March, and continues until the first Monday in July.

The fees are as follows:—

For the Winter Term, admitting to all the Lectures in the College,	$50.00
Graduation Fee,	20.00
Marticulation Fee,	5.00
Dissecting Ticket,	5.00
Hospital Ticket,	6.00

All fees are payable in advance.

Summer Course free to matriculated students of the College.

For further information inquire of

E. ANDREWS, *Secretary.*

Chicago, July 27, 1863.

REPORT ON THE SANITARY CONDITION OF THE WEST DIVISION OF THE CITY. BY H. WANZER, M.D., CHICAGO. READ TO THE CHICAGO MEDICAL SOCIETY, JUNE 13TH, 1863.—Dr. WANZER represents the health of the West Division of the city as having been good during the month of May and early part of June. Yet, he says, cases of fever, chiefly of the malarious origin, have been met with, which he describes in general terms as follows:—

"For several days previous to the call of the physician, the patients usually complained of lassitude, drowsiness, headache, backache, bitter taste in the mouth, sometimes vomiting of

bilious matter. These symptoms were, generally, followed by a chill." In their treatment, mercurial alteratives have been indispensable at the commencement of the attacks, followed by anti-periodics. Recoveries were, generally, rapid and complete. In relation to typhoid fever, the reporter says, "There have been but few cases of typhoid fever, though, in consequence of the malarial atmosphere we have had through the winter, and the filthy condition of the streets, alleys, &c., throughout large portions of the city, we may expect many cases later in the season."

He represents an unusual prevalence of exanthematous fevers, more especially of scarlatina, many cases of which were of the anginose variety. The milder cases uniformly recovered with but little medication. A few cases were represented to have assumed a malignant form, two of which were described nearly as follows:—

The first was a girl of six years of age. The attack was sudden and accompanied by so much swelling of the tonsils and glands of the neck as to render deglutition very difficult. At the commencement, the febrile excitement was very high, though the characteristic eruption on the skin was slight. The mouth was dry; and dark sordes gathered on the lips and gums; and, in a short time, an aplastic exudation covered the tonsils, pharynx, and some parts of the mouth, as in diphtheria. The strength rapidly failed, with a small and frequent pulse. The patient, however, recovered. The second case was a boy 3 years old. The eruption was not full, and the symptoms were of a typhoid character from the beginning; the pulse was very frequent and weak; the edges of the lips and gums became covered with dark sordes early; white exudations appeared in the mouth and fauces; the parotid regions were swollen; and, in the advanced stage of the disease, a large abscess formed in one of these regions. In their treatment, a mild aperient was first given, and followed by sulphate of quinine and muriated tincture of iron, with chlorate of potassa in solution as a gargle. Beef-tea and milk were relied upon for nourishment.

The reporter had observed only a few cases of erysipelas,

two of which proved fatal. One of the latter was a child only 12 days old. The erysipelatous inflammation commenced in the right breast, and spread so rapidly that the child soon became exhausted to a fatal degree. The other fatal case was a child 5 years of age. The child had received a severe fracture of the frontal bone, with laceration of the dura mater. The depressed portions of bone had been removed by an operation; and, in twelve hours afterwards, the wound was attacked with erysipelatous inflammation, which spread rapidly over the face, scalp, and meninges of the brain, and produced death in about seventy hours after the injury. He further stated, that during the preceding few weeks, a majority of his surgical patients had shown a tendency to traumatic erysipelas. Other physicians, with whom he had conversed, had noticed the existence of the same predisposition or diathesis.

He had also seen some cases of puerpural fever during the preceding month. Hooping-cough had also been sufficiently prevalent to merit the name of a mild epidemic.

CALOMEL AND TARTAR EMETIC AS REMEDIAL AGENTS.

SURGEON-GENERAL'S OFFICE,
WASHINGTON CITY, *June 12th*, 1863.

Dear Sir:—Desiring to obtain the opinions of the more eminent members of the Medical Profession relative to the indiscriminate use of Calomel and Tartarized Antimony, I have the honor to request that you will answer the following questions:

1st. To what extent do you prescribe Calomel and Tartar Emetic in your practice?

2d. Do you regard these agents as indispensable in the treatment of disease?

3d. In view of the facts that a large number of the Medical Officers of the Army are young and inexperienced, and that soldiers cannot in the field be placed beyond the influence of atmospheric vicissitudes and exposure whilst undergoing medical treatment, would you recommend that the medicines in question be issued to Army Medical Officers, except, as at present, upon special requisition?

4th. Do you or do you not think that more harm than good

has resulted from the use of Calomel and Tartar Emetic as medicines?

It should be stated that the following mercurials are at present on the Supply-Table, viz.:—

Hydrargyri chloridum corrosivum; Hydrargyri iodidum flavum; Hydrargyri oxidum rubrum; Hydrargyri pilulæ; Hydrargyri unguentum; Hydrargyri nitratis unguentum; Pilulæ catharticæ compositæ; and that it is provided by paragraph 13, of Circular No. 7, dated Surgeon-General's Office, May 7, 1863, which contains the Supply-Table, and which refers to the manner of obtaining medical supplies, that "it is not the design of the Department to confine the Medical Officers absolutely to that table, either in variety or quality, but only to establish a standard for their guidance in making requisitions for supplies, leaving individual preferences to be indulged at the discretion of the Medical Director or the Surgeon-General. Neither is it supposed that the quantities of the table will always meet the necessities of unusual emergencies, as, during epidemics, or in unhealthy seasons and localities; and Medical Officers who allow their supplies to be exhausted through any such contingencies, without timely notice of their approaching necessities, will be held to a strict accountability."

I am, sir, very respectfully,
Your obedient servant,
WILLIAM A. HAMMOND,
Surgeon-General U.S.A.

We copy the above Circular of the Surgeon-General of the United States Army, from the *American Medical Times*, of July 4th, 1863. From the language of the Circular and from the accompanying comments of the editor, it would appear that it is addressed to "the more eminent members of the medical profession," without reference to their connection with the Medical Staff of the Army. But two weeks later, we are assured, by the editor of the same journal, that the questions in the Circular were designed exclusively for the consideration of the Medical Officers of the Army, and not for medical men in civil practice however *eminent* they might be.

This Circular is certainly a very singular one. To appreciate its peculiar bearings, it must be remembered that in May preceding the same medical officer issued his noted Order, No. 6, prohibiting the further supply of Calomel and Tartar Emetic

to the Medical Staff of the Army. That order professed to be founded on the fact, that Calomel had been so abused by Medical Officers of the Army, as to have produced "not only *innumerable cases of profuse salivation*, but the *not infrequent occurrence of mercurial gangrene;*" coupled with the further allegation, "that *modern pathology has proved the impropriety of the use of mercury* in very many of those diseases in which it was formerly unfailingly administered." For these reasons, the order contained the following positive and unqualified directions, viz.:—"It is directed that it (Calomel,) be struck from the supply-table, and that *no further requisitions* for this medicine be approved by Medical Directors." It is well known that the first of the reasons assigned in the order, containing as it does a sweeping charge of mal-practice against the Medical Officers of the Army, induced severe criticism, and, in some very respectable quarters, positive denials of the truth of the charge, thus making a direct issue with the Surgeon-General in relation to the facts alleged. Under such circumstances, we certainly had reason to expect that the Surgeon-General would promptly sustain the truth of the allegations in his order, by publishing the actual *statistics of* "Salivation" and "Mercurial Gangrene," specifying the hospitals and regiments in which they occurred; and thereby not only silence further cavil in regard to the facts, but enable the profession to distinguish between the innocent and the guilty Medical Officers. But, instead of this, after a delay of two months, we have the puerile and very ridiculous Circular of Inquiry, quoted at the head of this article. We say, very *ridiculous*, for how else can we characterize the following?—

"Desiring to obtain the opinions of the more eminent members of the medical profession relative to the *indiscriminate* use of Calomel," &c. Is there any man of ordinary intelligence in the profession who could have any other than an *unfavorable* opinion of the "indiscriminate use" of Calomel, or any other medicine whatever? Why ask for "opinions" relative to a proposition stated in such form as to admit of but *one* opinion? But does the Surgeon-General, in thus artfully using the word

"indiscriminate," really persist in the desire to have the world believe the Medical Staff of the Army, over which he presides, to be composed of men incapable of any *discrimination?* Again, look at question number two:—"Do you regard these agents (Calomel and Tartar Emetic,) as *indispensable* in the treatment of disease?" Of course not. For that physician who could not select, from the other preparations of *mercury* and the large classes of alteratives and sedative nauseants in the *Materia Medica*, such articles as would enable him to treat disease successfully without the particular agents named, must certainly be possessed of very limited mental resources. But because a particular remedy may not be absolutely *indispensable*, does that constitute a good reason why its use should be prohibited? Mankind have lived and transacted all their necessary business with the aid of tallow-candles merely, therefore, *gas-lights* cannot be claimed as "indispensable."

The implied logic of the Surgeon-General would require the prohibition of gas, lest some blunderhead should chance to blow up a metre, now and then; and so we are to understand that the "*innumerable* cases of profuse salivation and the not infrequent occurrence of *mercurial gangrene*," have dwindled down to the simple pettifogging questions of this Circular; and the "Modern Pathology" which had "proved the *impropriety* of the use of *mercury*," &c., meant only *Calomel*, while the use of "Hydrargyri chloridum corrosivum; Hydrargyri iodidum flavum; Hydrargyri pilulæ; Hydrargyri unguentum," &c., are exempt from any such *impropriety*. Now, if the Surgeon-General will condescend to tell us what special mischief a "young and inexperienced" Medical Officer of the Army can do with Calomel that he cannot do equally well with blue mass, corrosive sublimate, iodide of mercury, and mercurial ointment, we will engage to tell him the exact difference between tweedle-dum and tweedle-dee.

Statistics of the Chicago Eye and Ear Infirmary.—*By E. L. Holmes, M.D., Attending-Surgeon.*—That during the year, ending May 1, 1862, *three hundred and ninety-seven* patients, and during the year, ending May 1, 1863, *two hun-*

dred and forty-seven patients were under treatment, making an aggregate of *one thousand two hundred and twenty-four* that have been treated since the opening of the Infirmary in 1858.

The following is a classified list of the forms of disease which have been under treatment during the past two years:—

DISEASES OF THE EYE.

Wounds and injuries,	34	Amaurosis,	15
Conjunctivitis, simple,	43	Cystic Tumors of Lids,	6
" granular,	144	Obstruction of Nasal Duct,	13
" neonatorum,	24	Trichiasis,	18
" scrofulous,	46	Inflammation of Lids,	17
" purulent,	16	Strabismus,	3
Ulcer of Cornea,	17	Cataract,	12
Opacity of Cornea,	18	Entropion,	12
Staphlyoma of Cornea,	14	Extropion,	9
Foreign Bodies on Cornea,	7	Asthenopœa,	13
Abscess of Upper Lid,	6	Pterygium,	6
Iritis,	15	Hydrophthalmos,	3
Occlusion of Pupil,	9	Obliteration of lachrymal canals,	2
Total,			522

DISEASES OF THE EAR.

Foreign Bodies in Ext. Meatus,	8	Impacted Cerumen,	8
Otorrhœa,	26	Thickening Membrana Tympani,	9
Polypus,	4	Inflammation of Membrana Tympani,	18
Tinnitus,	3	Unclassified,	37
Perforation Membrana Tympani,	9		
Total,			122

Of the aggregate number treated, viz., 644, *four hundred and fifty-one* were natives of foreign countries, and *one hundred and ninety-three* of the United States.

THE PITCHER PLANT IN SMALL POX.—*To the Editor of the American Medical Times, N. Y.*—Monday, May 18, 1863, was called to W. C., a young man 23 years of age, strong and vigorous constitution. Found him with all the premonitory symptoms of variola, the lumbar pains being particularly prominent. He had been exposed to that disease eight or ten days before. Does not remember ever having been vaccinated.

Tuesday, 19th.—Fever higher, and pain more severe; eruption beginning to appear. I gave him the usual treatment; but without entering into details, suffice to say that on Saturday 23d, there was a copious eruption of pustules about the size of small split peas, diffused over the whole body, particularly on the hands and face. The latter was so swollen as almost to close the eyes; the eruption being so thick even at this stage,

as to look like one great pustule. There had been more or less delirium during the night, and the severe lumbar pains were undiminished. It now occurred to me to give the sarracenia purpurea a trial, as it was growing in abundance in a marsh near the house. I sent out and procured some of the roots, and directed the nurse to give a teacup two-thirds full of the decoction every four hours.

Sunday evening, 24th, saw him again, had been delirious the night before, but was now calm, pulse slow, skin cool, and many of the pustules shrivelling. From this time the disease never advanced, but all the pustules dried up without maturing or leaving any pitting. The root in this case had cut short the disease. Let other physicians then give a trial and report on its results. Yours, &c.,

SAMUEL MITCHELL, M.D.

Cameron Mills, June 23d, 1863.—*American Med. Times.*

We call attention particularly to the above case, on account of the pitcher plants growing wild throughout Canada, and the facility therefore with which every physician can try it for himself. The effect of this remedy is one of the great controversies of the day in Great Britain, where it has been sent from Nova Scotia, and administered in the small pox hospitals to some of the most severe cases, and its powers denied. We shall be happy, therefore, to hear from any physician who gives it a trial; and also to learn the localities in which it is found most abundantly.—*Canada Lancet.*

CHRONIC ECZEMA.—M. Peters gives the following as a very successful mode of treating this disease, viz.:—

Saline Aperient.—℞. Sodii Chlor. ℥iij, Magnes. Chlor. ℥ij, Sodæ Sulph. ℥v, Magnes. Sulph. ℥i, Aquæ Oij. m. Dose, two tumblersful the first morning, and one tumblerful each on the second and third morning afterwards.

The Lotion.—℞. Hydrag Chlor. Cor. gr. ij, Aq. Lauro Cerasi ℥i, Spts. Rect. ℥ii, Aquæ ℥vij. m. The parts to be washed with this solution three times a-day.—*Revue de Therapeutique.*

The quantity of chloride of magnesium ordered, may be readily made by adding half a-drachm of the carbonate of magnesia to two drachms of muriatic acid, previously diluted with an ounce of water. And the ounce of cherry laurel water in the lotion, by adding 15m Scheele's hydrocyanic acid to an ounce of water.—*Canada Lancet.*

On Gonorrhœal Ophthalmia. By Dr. M. H. Collins, Surgeon to the Meath Hospital and County Dublin Infirmary. —This affection,—so formidable to the surgeon to deal with, and so fatal to the usefulness of the eye,—yields with marvellous rapidity to repeated weak injections. The inflamed and œdematous conjunctiva being punctured, or snipped with the scissors if necessary, a careful student can be put beside the patient's bed, and shown how to send the contents of the syringe underneath the upper lid, from the external canthus across the eyeball. In the most acute cases, a solution of a-quarter of a grain of nitrate of silver to the ounce of distilled water should be used every ten minutes, for the first hour; after that, a half-grain solution should be injected every half-hour. If this is carefully carried out for the first twenty-four hours, the patient's eye will be quite safe. A stronger solution may then be used; and, if needful, it may be followed, in a couple of days, by Guthrie's ointment of nitrate of silver, if the villous condition of the conjunctiva should seem to require it. I have followed this plan of treatment generally, for at least nine years; and in that time I have never lost an eye from gonorrhœal ophthalmia, with one exception; in that case, the pupil in charge broke the syringe, and thinking it a matter of no importance, he waited for twenty-four hours to get it replaced; by this time the cornea had sloughed in one point, and the iris protruded. The man, however, was so fortunate as to recover, with comparatively slight injury to sight. Such surgeons and pupils as followed any of these cases have been struck with astonishment at the facility with which this formidable affection is cured. I cannot at this moment remember to whom the credit of weak injections of nitrate of silver is due; my attention was drawn to it by seeing the failure of the heroic treatment, which sacrifices nearly 50 per cent of eyes in whole or in part. I found, however, that the weak solutions were insufficient for the cure of the disease unless frequently applied.—*Dublin Quarterly Journ.*

Syphilis.—The following paragraph occurs in a lecture by Dr. Wilks, of Guy's Hospital, on the syphilitic affections of internal organs. It enunciates an important principle in the treatment of syphilis, which we think will at once commend itself as true to the minds of most men who have had much practical experience of the disease:—

In thinking of this subject, from a therapeutical point of view, I have long been under the impression that the value of absorbent remedies, as mercury and iodide of potassium, is in

proportion to the formation of such low organizable material, and that these remedies are not curative in relation to the syphilitic poison itself; thus the failure of the iodide in secondary syphilis attended only by simple rashes on the skin, but its efficacy where pains in the bones exist, and other symptoms indicative of an inflammation of the fibrous tissues, with a tendency to the production of lymph.—*Edinburgh Medical Journal.*

Insane Poor.—On the 1st of January, 1862, there were in England and Wales, not including a few parishes making no returns concerning their poor, 946,166 paupers chargeable to the Poor-rates, and of this number 34,271 were insane—namely 22,960 lunatics and 11,311 idiots; in other words, 3·62 per cent of the pauperism was ascribable to insanity, the lunatics being 2·43 per cent, and the idiots 1·19 per cent. 14,936 were males, 19,335 females. 18,318 were in county or borough lunatic asylums, 1193 in registered hospitals or licensed houses, 8603 in union or parish workhouses, 985 in lodgings or boarded out, and 5172 resided with relatives.

Colocynth.—A gentlemen in Aylmer, Canada East, informs us, that being in a drug store and noticing the seeds in a colocynth apple, he procured a few and planted them, late in the spring, in a poor piece of ground with his potatoes. They throve well and bore fruit, a few of which ripened before being destroyed by frost. He describes the plant as resembling very much that of a water melon, and the fruit to be like oranges in size and appearance. Acting on this success, we sowed a few seeds in the open ground on the first of May last, the plants are now several inches in height, but have not yet commenced to run.—*Canada Lancet.*

Breast-pin Swallowed by a Child.—In the *Edinburgh Medical Journal*, Thomas Annandale, Esq., F.R.C.S.E., relates the case of a child, aged three years, who swallowed a breast-pin about three inches in length, which was voided in twenty hours afterwards, the child having suffered no inconvenience.—*London Lancet.*

Former and Present Mortality of London.—From 1765 to 1775 the mortality of London was estimated at about one in twenty, or 5 per cent; in 1862 it was one in about forty, or less than 2½ per cent.—*London Lancet.*

Oxygen Gas.—At the last sitting of the Academy of Sciences of Munich, Baron Liebig made a very interesting communication relative to some experiments made with a new apparatus,—manufactured chiefly at the expense of the King of Bavaria,—for detecting the existence and measuring the quantity of oxygen in various bodies. The experiments, Baron Liebig stated, had proved clearly that oxygen is not only evolved from the atmosphere by plants, but also in tolerably large quantities by decomposition of water in the body of flesh-eating animals. Baron Liebig thinks that the knowledge of this fact will throw quite a new light on the hitherto but imperfectly understood processes of nutrition and digestion.—*London Lancet.*

Extraction of a Ball.—On Tuesday last, the seventeenth anniversary of the Battle of the Sobraom, a veteran applied at the North Staffordshire Infirmary to have an iron musket ball, or grape-shot, extracted from below the shoulder-blade, where he received it in that memorable battle with the Sikhs. The operation was successfully performed under chloroform by Mr. William Henry Folker.

Poisonous Ballet Dresses.—It is stated, that the first representation of a new piece has just been given at Hamburg, in which the female dancers appeared in green costumes to represent water-nymphs. The stuff of which these costumes were made contained such a quantity of arsenic that the needlewomen who made the dresses fell ill, and the dancers were attacked with violent symptoms of poisoning whilst on the stage.

Elaterium.—Dr. Thomas, near Philadelphia, informs us that he has been very successful in growing Elaterium plants in the open ground, by seeds sown in a sunny situation in May. He collected well-matured fruit from the plants for exhibition in the latter part of August. A few seeds dropping on the ground, outlived the winter, and grew thriftily the following spring.—*Canada Lancet.*

Muscular Electricity.—Ranke, the German physiologist, has published, amongst the results of his investigations into the phenomena of electric currents in the muscles, the fact that dead muscle is a much better conductor of electricity than the living muscle, because, as he judges, of the presence of certain products of decomposition which do not appear till after death.